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A Review of the Hardware, Iron and Metal Trades.

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rate knowledge of the chemical constituents of the metals and other materials employed of the metals and other materials employed was essential to its successful conduct. I reasoned that as all pig irons did not form the basis of equally good wrought irons, so there was no probability of uniformly good steel being produced from miscellaneous pig metal; and, further, that while in the then state of our knowledge it would be impossitive forms chonical analysis just state of our nowscape is visual analysis just what was the best iron for the new process, it would be possible, after having demonstrated by experimental working that certain irons were and others were not suited for our purpose, to make an analytical compari-son of them, the result of which would be a permanent guide for future operations, en-lying us to determine by analysis and com-parison whether any offered brand of iron abling us to determine by analysis and comparison whether any offered brand of iron was of suitable quality, thus saving a large outlay for direct experiment in the "converter," and serving as a check upon the running of the blast furnace, as well as a guide in the purchase of metal and other materials. These considerations, and others of an administrative character, determined the construction of a chemical laboratory as an adjunct to the works. The importance of a thorough knowledge of the chemistry of the new process, and the necessity for a laboratory in close promixity to the proposed works to facilitate the attainment of such knowledge, was promptly recognized, and the construction of the laboratory cordially approved by the late Z. S. Durfee, who was acting as secretary of the parties in interest (of whom he was one), and in the spring of the year 1863 he secured the services of Mr. Emile Schalk, a native of Germany, and a graduate of the Ecole Centrale of Paris, as chemist, Mr. Schalk purchased a stock of chemicals, together with necessary glassware and other apparatus for use in the laboratory, but as the building was not completed when he reached Wyandotte, he, at the request of the late Capt. E. B. Ward, assisted in the organization of an exploring party, which he accompanied to Northern Wisconsin; the result of this expedition was the discovery of a number of deposits of iron ore. On Mr. Schalk's return in October

ore. Oh sir. Schala's retain in Geochi (1863), the laboratory being finished, he at once proceeded to analyze the samples of the ores he had discovered. I am able to give his analysis of four of these samples. trace trace 100.00 Oxygen. Silica.... 100.00 100.00

e discovery of a number of deposits of iron e. On Mr. Schalk's return in October

Mr. Schalk also commenced some original vestigations with a view to the determina-on of the influence of nitrogen upon steel these promised to develop very interesting and valuable results, but, unfortunately, cir-cumstances for which Mr. Schalk was in no ay responsible caused his resignation in ecember, 1863, before they were completed.

If Mr. Schalk's abilities I had the highest stimation, and I very much regretted his parture from Wyandotte. Having de-ribed the inception and initial work of the wyandotte Laboratory, I will now call your ttention to its arrangement, and also to one of the apparatus employed. As shown by the plan (Fig. 1), the main building was about 24 feet square; it was divided by a cartition into two rooms, A and B, of equal size, which communicated by a door at Z. At the room of this building was a lean-to shed. rear of this building was a lean-to shed which was entered from without by the oor d, and from within by the door x, communicating with the room A, at the opposite and of which was placed the entrance door y.

The room A was used for general analytal work; it was provided with three work ables, the requisite shelving for reagents and apparatus, a large pair of balances, a and-bath furnace having a hot-water reseroir attached, a small assay furnace, a sink, in abundant supply of water and an oxylydrogen blow-pipe, the gas holders of which were located at O H. The room B was proided with a stove, a desk, assay balances, helving for specimens of minerals and netals, a work table having a case of shelves above it, at the end of which, at P, was

Read at the Troy meeting (October, 1888) of the merican Institute of Mining Engineers.

TABLE

Fig. 7.—Titration Apparatus.

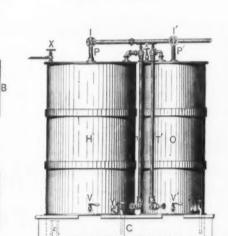


Fig. 8.—Elevation of Gas-Holders.

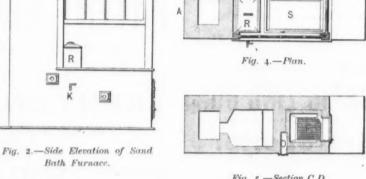


Fig. 1.-Plan of Laboratory

Fig. 5.-Section C D.

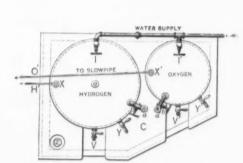


Fig. 3.-End Elevation.

Fig. 6.-Section A B.

Fig. 9.—Top View of Gas-Holders.

CHEMICAL LABORATORY ERECTED AT WYANDOTTE, MICH., IN 1863.

The sand-bath furnace was located in one | neck of this bottle has adapted to it a glass | 2. Its composition should be such as to corner of the room A (Fig. 1). Its construction is illustrated in Figs. 2, 3, 4, 5 and 6. The basin S for holding the sand was made of wrought iron, & inch in thickness. The water in the copper reservoir R was kept at or near the boiling point by the waste heat from the fire at F. The reservoir was provided with a cock, K, for drawing off its convided with a cock, k, for drawing on its con-tents. Two drying ovens, O, of copper were imbedded in the brickwork. The inclosed space above the sand bath was provided with weighted sashes on its front and right-hand end, and was ventilated at its top by an opening into the chimney flue. This an opening into the chimney flue. This construction of sand bath was found to be

very convenient.

The permanganate of potassa apparatus is illustrated in Fig. 7. Though the same in principle, it is not of the precise construction as that used at Wyandotte, but contains some improvements, the result of experience, which render it more substantial and con-

tube, X, whose inner end passes nearly to admit the bottom of the bottle, outside of which mass. the tube ascends to about the level of the top of the bottle A, and then by a semicircular curve to the right it reaches the upper end of the air pump P, which is supported by a ouple of screw-eyes, e e, at such a distance from the wainscoting as to admit of the hand readily grasping the bulb of the pump. When we wish to fill the "burette" with

the permanganate solution we proceed as follows: The glass plate G is removed, and the air pump P is worked, thus forcing air, by way of the tube x, into and through the by way of the tube x, into and through the concentrated sulphuric acid in the bottle S; this acid arrests all the moisture and organic matter in the air, which then passes through the tube U into the space above the permanganate solution in the bottle A; as the pressure increases the permanganate rises in the tube T, and finally runs into the "burette" in a stream whose flow is easily controlled by the more or less rapid work.

admit of its being baked in place into a solid

This mass should have sufficient cohe-

4. The lining should be able to withstand an exceedingly high temperature for a prolonged period without melting.

5. It should oppose a maximum resistance to the fluxing action of the highly heated metallic oxides and other impurities in the converter.

Experimenting in the converter with materials for linings I was sure would be very expensive, and, in the event of frequent failures, discouraging; it was, therefore, desirable to have as little of this as possible, and, with a view of throwing all obtainable light upon the question, I determined to institute a series of experiments in the convergence of the convergence o stitute a series of experiments on materials for converter linings in the laboratory. It wenient. The apparatus consists of a large two-necked bottle, A, for holding the permanganate solution, to the left-hand neck of which is adapted a glass tube, T, which extends nearly to the bottle, its upper end being tapered and curved so that its extremity is directly above the central property of the stream whose flow is easily controlled by the more or less rapid work-ing of the air pump P; in fact, as the level of the solution in the "burette" approaches the zero of its graduation, the stream can be made to resolve itself into a series of their friability and fusibility. It was evident that its extremity is directly above the central property furnace small bricks or balls of any combination of refractory materials, and these could be compared as to their friability and fusibility. It was evident that, in order to correctly compare the fullest extent in order to equalize the press-

An Account of a Chemical Laboratory Freeted at Wyandotte, Mich., in the Year 1863.*

By W. F. Durffee.

In the year 1862 the author of this paper was called upon to design and superintent the erection and working of the machinery of an experimental works for the production of sex perimental works for the production of sex pe able by its use it was necessary to employ oxygen in connection with it. In short, I was naturally led by the character of the was naturally led by the character of the proposed investigations and the nature of my environment to the employment of the "oxy-hydrogen blow-pipe as to that date constructed was, for my purposes, defective in one particular, viz.: No form of it with which I was acquainted had any certain provision by which the two gases employed. vision by which the two gases employed could be sent to the point of combustion in exactly their combining proportions—two volumes of hydrogen with one volume of oxygen—and unless that result was attained

oxygen—and unless that result was attained the temperature of the blow-pipe flame would necessarily be variable, and no two experiments could be fairly compared.

This consideration caused me to devise what I believe to be a novel method of assuring the proper combination of the two gases, and it is to this feature, as well as to the general character of the appearatus for gases, and it is to this feature, as well as to the general character of the apparatus for holding them, that I now ask your attention. The two gas-holders, H, O (Fig. 8), intended respectively for hydrogen and oxygen, were made of galvanized iron. They were each strengthened by two circumferential bands of the same metal, and additional strength was given the hydrogen holder by a bolt which united the centers of its ends. The two gas-holders were of the same hight, but their respective diameters were such that the area of a cross-section of H was twice

the area of a cross-section of H was twice that of a similar section of O.

The gas-holders stand upon the cover of a shallow eistern, C, which, when the apparatus is in use, is filled with water. The gas-holders were supplied with water from an elevated reservoir by pipes, P, P', which, passing air-tight through their tops, extended nearly to their bottoms. The rate of admission of the water to each gas-holder was adjusted by the valves I. I's its function was sion of the water to each gas-holder was adjusted by the valves I, I¹; its function was to expel the gas from the holders through the small rubber tubes H¹, O¹ attached to the regulating valves X, X¹. Each of the gasholders was provided with a glass water-gauge tube, T, T¹, having valves, a, a¹, b, b¹, by closing which communication between each tube and the interior of the gasholder. each tube and the interior of the gas-holder to which it was attached could be cut off. Near the bottom of the gas-holders were located two cocks, V, V' and Y, Y', each of the latter having attached short pieces of tubing, which extended nearly to the bottom of the water in the cistern C before named. This This cistern is provided with a tubular overflow plug Z, which, when in place, determined the maximum depth of water in the cistern, by the removal of which the cistern could be emptied.

Before describing the operation of the ap-paratus I will explain the method by which the holders were filled with gas, and for that purpose will ask you to suppose that we are about to fill the holder H with hydrogen. We first uncouple the rubber tube H' from the valve x, which we then open, as also the valve x, which we then open, as also the valves a and b, and make sure that the cocks V and V are closed; we then open the valve V and allow the water to fill the gas-holder, the air in which being expelled at the open valve x1, but as soon as the water manifests itself at that valve it is closed, as also the valve I. The air having thus been expelled and the gas-holder filled with water, we now couple to the cock V one end of an iron pipe, whose other end is connected with the apparatus for generating the gas, care being taken that some point in this pipe is considerably higher than the top of the gas holder. All the connections being properly made and the generator at work, we open the cocks V and Y, and as the gas enters the holder it displaces the water therein, which finds an exit through the cock Y into the cistern C, and finally over the top of the tubular plug Z into the drain-pipe, in which the plug is inserted; thus a certain depth of water is maintained in the cistern C, and as the pipe attached to the cock Y extends nearly to the bottom of this water, all air is prevented from entering the gas-holder during the process of filling it with gas. The rate at which the gas enters the holder is indicated by the descent of the water in the glass tube T, and descent of the water in the glass tube T, and the final completion of the filling process by bubbles of gas rising through the water in the cistern C, from the lower end of the tubular extension of the cock Y; when these bubbles make their appearance the cocks Y and Y are closed, the iron-pipe connection to the gas generator disconnected, and after compling the rubber tube H; to the valve we coupling the rubber tube H' to the valve x the gas-holder H is ready for use. The gas-

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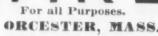
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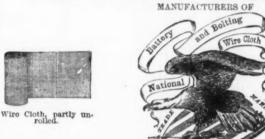
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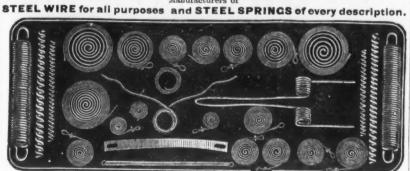
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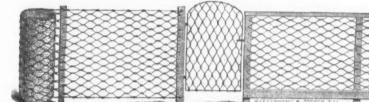
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are in the two gas-holders, the rubber tubes H1 O1 are connected with the blow-pipe, the valve X is partly opened and the jet of hy drogen issuing from the blow-pipe is ignited The valve x is then opened and so adjusted that the water rises in the gauge tube T at the same rate as in the tube T, and when the water in these tubes rises with a uniform velocity the two gases combine at the blow-pipe in the proportion of two volumes of hydrogen and one of oxygen, giving the maximum heat for the gas consumed, but it is evident that as the amount of heat developed in a given time will be proportioned to the gas consumed in that time, it is necessary to so adjust the valves x and x^1 that the sary to so adjust the valves x and x^t that the same amount of gas is always consumed in a unit of time, for unless this was accomplished no correct comparison of the fusibility of the several samples of refractory material under examination could be made. The samples of refractory materials to be tested were placed in a shallow cavity cut in a fire-brick; this was surrounded with pieces of brick or tile to prevent access of currents of cold air.

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himself a chemist) entered into an inventive conspiracy and induced the late Capt. E. B. Ward to furnish the money for certain experiments by which they were certain to demonstrate that the large blowing engine I was erecting was entirely unnecessary, their argument being that all that was required to convert cast iron into steel was the forcing of abundant oxygen through it when melted, and, as water contained a large proportion of oxygen, the substitution of steam taken di-rectly from the boiler for atmospheric air rectly from the boiler for atmospheric air under pressure would greatly simplify and cheapen the process. The Captain was cau-tioned not to consult me in regard to the matter, as I would be sure to condemn the idea, in which statement they were quite right. These experiments were privately conducted in Detroit, and resulted in the loss of the Captain's money and the reputation of the experimenters at the same time. One of last-named parties (not the chemist) ed what "that stuff in that little cup in asked what the balance case was for?" I briefly ex-plained that it was "to absorb the moisture from the air in the case and so prevent the corrosion of the steel parts of the balance."
This was made a note of, and in a few days he young gentleman took some of the 'stuff' to a young lady who had just received a present of a very valuable piano, and advised her to "put it in a saucer and place it in the piano to prevent the strings from rusting." This advice was followed and resulted in the simultaneous ruin of the instrument and the popularity of the young gentleman.

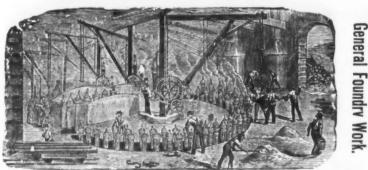
Two of my assistants (one of the pair called

One enthusiast who firmly believed that the result of an analysis was inevitably a realization of St. Paul's idea of faith, "the realization of St. Paul's idea of faith, "the substance of things hoped for and the evidence of things not seen," at the particular request of the late Captain Ward did something which he called an "analytical examination" to a sample of coal. His report was so favorable as to its manifold good qualities that the captain purchased the mine from "Cumberland" Nails and Wrought Iron Pipe,
so favorable as to its manifold good qualities that the Captain purchased the mine from whence it came, only to find, after a large expenditure for pumping machinery, coal care, men's houses and other plant, that there was not enough of this good coal in the mine or on the property to pay for in the mine or on the property to pay for in the mine or on the property to pay for the sibulation and in the mine or on the property to pay for working; hence lawsuits, tribulation and sorrow. In justice to myself I will say that none of the parties whose antics I have in-completely described were of my selection;

completely described were of my selection; they were thrust upon me, and I was obliged to make what use I could of them.

But let us now turn to some of the more serious and effective work accomplished by the laboratory. Some time in the year 1864, in conversation with the late Capt. E. B. Ward, relative to the economies possible in the manufacture of iron, I spoke of the fact that all the cinder resulting from the puddling of Lake Superior pig with Lake Chamdling of Lake Superior pig with Lake Cham-plain magnetic ore as "fettling" in his Wandotte rolling mill was thrown away, instead of being utilized in the blast fur-naces. "Why," exciaimed the Captain, "Herr Uukunde Unheilschwanger (then a leading metallurgical authority in Wyau-

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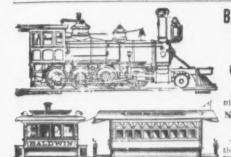
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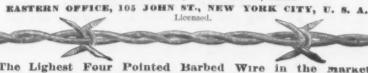
FIG CATUS

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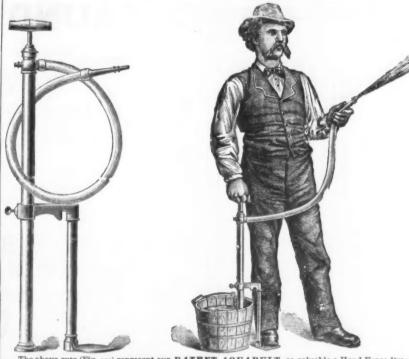
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the same piece of work, is a matter of small importance, or, in other words, the nature of the work is such that even at the best it tion, the intense pressure of the hydraulic

dotte) says there is no iron in the cinder." dotte) says there is no iron in the cinder."
To my reply that there was "over 50 per cent. of good iron in it," he expressed a wish to "see some iron that was made from that cinder." I assured him that he should, and a day or two thereafter I placed in his hands a "button" of iron nearly as large as the palm of my hand, representing 55 per cent. of the cinder from which it was smelted in the pot furnace of the laboratory. The Captain was not only surprised, but annoyed, at the evidence of waste in the past—a waste Captain was not only surprised, but annoyed, at the evidence of waste in the past—a waste that could be counted high among the thousands of dollars, and he immediately gave orders to Herr Unkunde Unheilschwanger to see that this cinder was used in the blast furnaces; but so alarmed was this worthy at the possibility of what he called "bunging up" the furnace that he carried out his orders by at first charging 10 pounds of cinder with 400 pounds of Lake Superior ore, and ders by at first charging 10 pounds of cinder with 400 pounds of Lake Superior ore, and with 400 pounds of Lake Superior ore, and as no harm resulted from this homeopathic dose, his confidence increased gradually, as he slowly augmented the proportion of cinder, until, after several months of anxiety, doubt and fear, he arrived at what he regarded as an almost dangerous proportion—A populas of Lake ore. I believe this was garded as an almost dangerous proportion—
40 pounds of Lake ore. I believe this was
the largest proportion of cinder used at that
time, and recently I have been authoritatively informed that as soon as I had left the vicinity the use of cinder in the blast furnace was discontinued, and it was thrown away as before. While I was engaged in experimental work with the oxy-hydrogen blow-pipe, a circumstance occurred which is blow-pipe, a circumstance occurred which is a fair illustration of the malicious character of the antagonistic feeling that existed in the community relative to the laboratory and all that were connected with the new enterprise. One morning, on attempting to put the blow-pipe in operation, to my surprise, after burning a short time the flame was extinguished, and, what astonished me still more, I could not relight it. On examination I found that the water-pipe had been ination I found that the water-pipe had been disconnected, and a tightly-fitting wooden plug had been driven into it; the pipe had then been recoupled, so that to all appear-ance everything was in good working order. Whether the scoundrel who inserted that plug and simply mischief or murder in his heart has not yet been revealed. Soon after this occurrence, in the month of January, 1865, on my return from a short absence, I entered the laboratory only to find naked walls; everything removable had been taken away; not so much as a test tube remained to show that chemical work had ever been done in the building. Herr Unkunde Un-heilschwanger and kindred spirits had at last accomplished that for which they had so long labored. "Durfee's 'pothecary shop," as it had been derisively called, had ceased

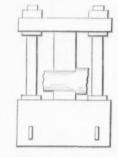
At the act of vandalism which I have described I manifested no surprise; of it I made no complaint; but, then and there, I mentally resolved that as soon as the first rail was rolled from steel made at Wyandotte I would leave a community which had afforded me so many painful illustrations of the potential verity of the lines of Grey:

"Where ignorance is bliss 'Tis folly to be wise."

The value of any particular mechanism or method of procedure may be fairly measured by the frequency of its use; and retrospectively contemplating the ever-increasing proportions of our metallurgical industries, reflecting upon the enormous aggregate of reflecting upon the enormous aggregate of their present annual production, and remembering that these splendid results are but the crystallization of the intelligent thought of skillful men from among our engineers, metallurgists and chemists, I find my justification for the chemical work undertaken at Wyandotte in the fact that to day, in every well-ordered establishment for the manufacture of metals, the laboratory is considered an indispensable adjunct, and Science, represented by the engineer and chemist, stands at the right hand of Labor, advising, guiding, directing and controlling its every movement. ment.

Notes on Hydraulie Work, &c.

An important objection to the use of the hydraulic press is the fact that its operation must be intermittent, the effect due to the pressure exerted being such that for the instant the work under treatment must usually be held absolutely at rest. Hence it follows that if a pressure must be exerted a second time upon the same spot the press must be backed and brought up again, with a repetition of the whole operation for each separate effort. In some classes of apparatus the machine tools, for example, of which quite a large variety have already been proposed and executed, these successive motions can be made with considerable rapidity, thus rendering



riveting machine may be taken as the type, usually are worked under a very heavy pressure (from 1500 to 2500 pounds per square inch), so that for the work which they must do the parts of the machine—the ram upon which the pressure acts and the links or other parts of the framing—may be comparatively light. For some purposes the slow movement of the parts of the press, when successive strokes must be made upon the same piece of work, is a matter of small has thus been found possible to combine in the

can be done only very slowly, and hence, if

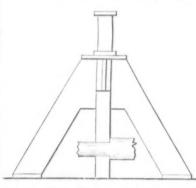


Fig. 2.—Steam Hammer, Moderate or Lone Pressure, with High Velocity of Motion

can be brought to bear upon the metal under treatment which is limited only by the strength of the massive parts of the machine. At the same time, also, and continuously, a motion through or between the rolls can be imparted to and maintained with the material such as shall insure the work-ing or the compression and extension in length of the metal, at a speed which, in the modern and fully-equipped rolling-mill, is surprising and almost incredible. The fact that the action of the rolls is the same in kind as that of the hammer or the press may be illustrated by comparing the working of the perfect mill with that of one in which the rolls, instead of being finished in true circles, are made with a limited number of flat sides, so that the cross-section shall be a polygon of six or more sides. If the usual motion be then imparted to these polygonal rolls, the material, in passing between

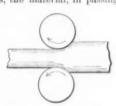


Fig. 3 .- Rolling Mill, Very Heavy Pressure, with Rapid Motion of Bar Between the Rolls.

them, would be compressed or worked upon by the high corners of the polygons, and would be pushed forward by a series of im-pulses, more like the blows of a circular hammer or press, if such a tool can be imagined, than anything else which can be

It is quite evident that no machine could be made to endure for more than a very short time the shocks due to such an outline of rolls after the piece under treatment had become somewhat cooled, and thus more dense and difficult to work, although for some kinds of material the grooves in the rolls for the earlier and easier part of the rolling are "roughed" to such an extent as to render them approximately polygonal in outling. The use on the other hand of the outline. The use, on the other hand, of the ordinary smooth roll leaves very little indeed to be desired in this part of the machinery



Fig. 4.-Rolling Mill, Assumed Polygon Outline of Rolls.

for the manufacture of metals, so far as the production of a maximum output with a minimum of wear and tear and of cost for labor is concerned.

Fig. 1 shows a skeleton outline of a hydraulic press, although it has very rarely been used for working iron on any important scale. Fig. 2 is the common form of hammer used for the heavier kinds of forging, MALLEABLE, FINE GRAY IRON AND STEEL CASTINGS made from patterns to order. Special attention given to Tinning, Bronzing, Coppering, Japanning and Fitting. A large line of Carriage and Wagon Castings constantly on hand for the trade.

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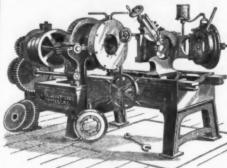
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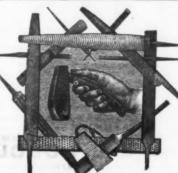
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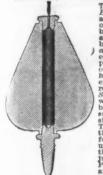
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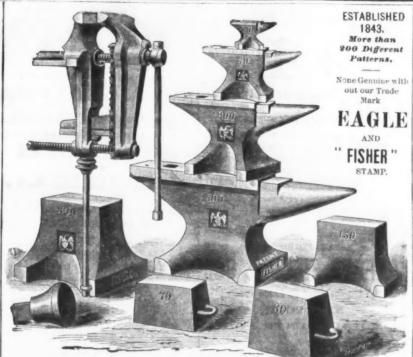


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tion of iron and steel is made up. For very obvious reasons, this improved method of the rolling-mill type of working, as it may be called, which in its essential idea dates back many years, has so very greatly cheap-ened the cost of iron and steel bars that they are used in a thousand-fold more ways and places than they possibly could have been used if made only under the hammer, as in limited amounts they were made many years ago. It is evident that by the substitution of the continuous pressure of the rolls of the rolling mill upon the bar or plate—or, in other words, the quick succession of blows at extremely small intervals of time—for the slower movement of the ordinary hammer, however, fast, it runs, an important relief slower movement of the ordinary hammer, however fast it runs, an important relief would be sure to be found from the wear and breakage of parts, due to the constant blows of inelastic bodies like the head and anvil of the ordinary hammer. This relief was probably more striking in the earlier days of iron-making than at the present time, for the hammers now built for such work are much stronger and more correctly. work are much stronger and more correctly proportioned in all their parts than those were with which the early rolling mills came at once into competition. Hence a far less wear and tear is experienced in the working of modern high-class steam ham-mers, even when run to their utmost capacity, although the hammer, as an implement for rapid production, was left hopelessly in the rear, even by the weak and comparatively trifling rolling mills in use a

generatively triming rolling mills in use a generation or more ago.

It is worthy of note, too, that the nature of the material and of all these methods of working in the high-speed rolling mill are such that the element of speed, and its strict maintenance, is one of vital importance. This work—the proper reduction in the area of the bar as it becomes extended in length of the bar as it becomes extended in lengthis such that it must be done at this high speed or it cannot be done at all. These speed of it cannot be done at all. These rigid requirements of the rolling-mill service have led to improvements in the design and construction of the rolling-mill engine which are more striking in their kind, probably, than any yet introduced into the slower-moving machines referred to in this connection, and are probably more ingenious than the simpler move-ments of these older machines will ever call for. These engine improvements, so far as they have been made really successful, have been kept very closely along the line of the greatest simplicity and most massive strength of parts.

Bench Power Press for Extra High Work.

Among the presses manufactured by the Ferracute Machine Company, of Bridgeton, N. J., and illustrated in their new catalogue, is a power bench press which is noticeable for its simple construction. Referring to the annexed cut, it will be seen that the slidebearings are cylindrical, the slide-bar consisting of only three pieces, viz.: The upper bar, which is also an eccentric strap and pit-man combined; the lower bar, which is adjusted up or down by being screwed into the upper bar, and a lock-nut, which locks the

upper bar, and a lock-aut, which locks the two together. This construction limits the press to the production of round work.

The shaft is provided with an automatic clutch, attached by a chain to a treadle on the floor, so arranged that a pressure of the foot causes a part of the clutch to come into connection with the revolving fly-wheel and make one revolution. Continuous strokes make one revolution. Continuous strokes are made by locking down the treadle. An eccentric keyed to the shaft gives motion to the slide-bar, and an adjustable spring brake at the end of the shaft regulates the action of the clutch. The bottom end of the slide-bar is a greater distance from the bed of the press than usual, thus adapting it for taller work than will go in an ordinary press. Work for which this press is especially adapted is flaring or closing in the ends of cans, flaring or spreading can bodies, curling or wiring cups, cans, pans and other articles of tinware.

It is not adapted for cutting The dimensions, &c., of the press are as follows: Hight from bench to top of l, 45 inches : dist back from center bar, 4 inches; hight from bed to slide-bar, when up, 13 inches; stroke of slide-bar,

machine is about 350 pounds.

Shipbuilding on the Pacific Coast .crane with 50 feet span and 25-foot lift. The core room is 40 by 40 feet, and the brass foundry and coppersmiths', shop 40 by 45 feet.

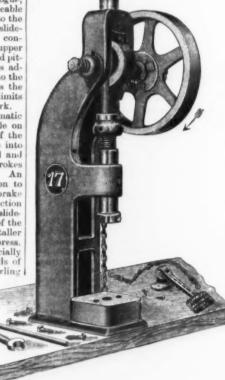
The machine and erecting shops each will be wood says that it takes 10 per cent. yearly

press, the high velocity of motion of the steam-hammer and the rapid linear motion of the bar, thus securing the needed effect of the shaping of the bars or plates of which so large a proportion of the whole productive productive feet, and the erecting shops, 55 by 200 feet. The traveling crane here has a 55-foot span The traveling crane here has a 55-foot span and a 35-foot lift. Adjoining will be a machine shop, 40 by 130 feet, and in the front of which will be situated the company's offices, occupying a space of 40 by 70 feet. From the works will run out two railroad tracks to a wharf on one side and on the other to the dry dock. to the dry-dock. Mr. Scott states that the company are in earnest, and intimates that they may be ready to take contracts early next year.'

Corroded Wire Cables.

The Pittsburgh Telegraph says: "The Suspension Bridge, that link between the ister cities which is traveled by hundreds of thousands of people weekly, has been in such a state of commo ion, owing to the repairs being made upon it, that people have complained and growled at the inconvenience occasioned, and some of the papers have even said that the directors have been spending the money in order to cut down the reserve fund—all of which is an injustice to the bridge company in this instance. The work on the bridge is under the care of Mr. F. Collingwood, an old and experienced engineer, sent out by Colonel Roebling, who built the bridge and is a large stockholder in it. It is 24 years since the bridge was built, and in all that time the moorings of the cables have not been repaired to any great extent Colonel Roebling thought it would be well to examine the wires and see what condition they were in, and it is well that such scrutiny took place, for the bridge was in danger of being ruined by the sagging and even by the breaking of the cables. The large cables, which are 714 inches in diameter, were closely surrounded at the moorings on each end by masonry which was concreted closely around the wires. Before the cables were so surrounded they were covered with a preparation of boiled tar. Tar was once supposed to be an admirable protector of including the surrounded they are supposed. iron, but this belief was exploded long ago, and the result in the present case illustrates how injurious it is. The tar gradually, through atmospheric influences, changed ruining the wire. The water was rapidly ruining the wire. The water contained chloride, carbonate and other salts of ammonia, which ate the iron. Some pieces of wire were dotted with little holes like smallpox pits, where the rust had gnawed away the material, and when the wires were uncovered and a strain put upon them they snapped like straws. Although each of the ½-inch wires should stand a strain of over 1200 pounds, they broke at 200. As soon as this state of affairs was discov-

ered Mr. Collingwood began to scrape the tar off and carefully overhaul each cable. Whenever a defective piece was found it was cut out and a new piece spliced in. The



slide-bar, 3½ inches; diameter of fly-wheel, 18 inches; width of fly-wheel, 3 inches; weight of fly-wheel, about 75 pounds. The weight of the whole registration of the pounds. The weight of the whole right strain on the new piece. There must right strain on the new piece. There must be no slack wires in the cable, of course, so Shipbuilding on the Pacific Coast.—
The San Francisco Bulletin says: "There is a prospect that an extensive shipbuilding delicate tests. In one large cable 175 wires yard will be established at South San Francisco for the construction of iron and steel ships and steamers. The parties interested are the proprietors of the Union Iron Works, consisting of George W. Prescott, H. W. Scott, Irving M. Scott, George W. Dickie and J. O'B. Gunn. The yards will be established on the Potrero, on the south side of the Central Basin, and will have a frontage of the offect. There will also be moved the which is allowed to dry, and a thorough and the conting of linseed-oil, which is allowed to dry, and a thorough and the conting of the second secon will be established at South San Fran- had to be spliced, in another 31, in another of 1100 feet. There will also be moved the which is allowed to dry, and a thorough ap Union Iron Works, this establishment to be plication of white lead is given. Then the included in the shipyard plant. The whole wires are drawn together by bands of small will occupy 16 acres of land, and will adjoin the extensive dry-docks reported soon to be on. The wrapping consists of wire 1 inches apart, and the wrapping goes on. the extensive dry-docks reported soon to be constructed by an English company. The plans show that there are to be several extensive buildings, of which the boiler maker's shop will be 200 feet deep by 90 in width. In this there will be a traveling crane with a 55-foot span and 35-foot lift. The smiths' shop will be 40 feet front by 200 deep. The pattern shop will be 50 feet front by 150 deep, and adjoining will be the supply shop, the dimensions of which will be 50 by 50 feet. The foundry on the right will be 150 feet. The foundry on the right will be a traveling crane with 50 feet span and 25-foot lift. The sustensions of which will be a traveling crane with 50 feet span and 25-foot lift. The woodwork, holes have

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NOW, This, is to Witness, that, in consideration of the forbearance of the presentatives of the said John Wilson to sue me for damages for the wrong oresaid, I do hereby undertake and agree,

FIRST, to surrender and deliver to the Attorneys for the said John Wilson, all knives now on hand, and in my possession, or under my control, bearing the said imitation trade-mark, and

SECOND, I further undertake and agree to and with the said John Wilson, and his legal representatives, not to manufacture or soll, or cause to be manufactured or sold, at any time'in the future, Knives or other Cutlery, bearing his trade-mark aforesaid, or any imitation or simulation thereof. IN WITNESS WHEREOF, I have hereunto set my hand and seal at West Mansfield, aforesaid, this thirty-first day of May, 1885.

WITNESS:—

E. M. REED."

(Attorney for Defendant.)

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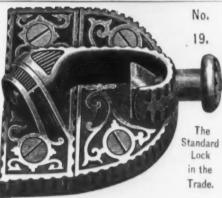
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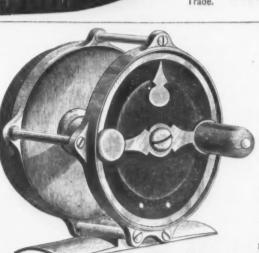
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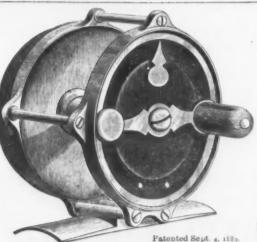
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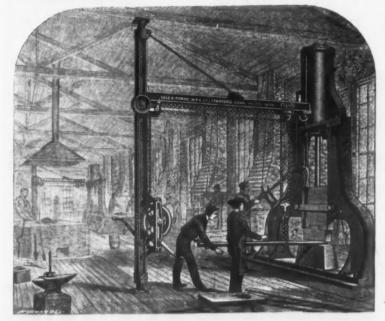
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to allow more than 12-ton loads to pass over.

Wire Cloth for Lathing.

Various forms of metal have been used at different times as substitutes for wooden lath, among which may be mentioned wire-cloth. which has been extensively introduced. One of the chief claims of this material to favor is that by its use wooden buildings can be rendered practically fire-proof. Cast and wrought iron beams and columns in building construction, unless they are thoroughly protected from the action of fire, are not to b depended upon. A comparatively low heat renders them useless, and in many cases buildings are thrown down by the expansion of the metal and the sagging of heavily-loaded floors at a very early period after a fire breaks out. It is well known that fire-men will refuse to enter an iron building for the purpose of fighting a fire, while they will contest the progress of the flames step by step in a building having wooden columns end floor beams. Since iron, to be entirely serviceable, must be incased in some nonconducting material, and since in many cases equally as satisfactory results are obtained from wood similarly protected, and withal at a much lower first cost, it follows that the use of wood in this general manner is becomase of wood in this general manner is becoming very common. One of the best protectors of wood is mortar, and, accordingly, some method by which the mortar can be held in place during the action of intense heat is a prime essential. Wire-cloth used as lathing has been demonstrated by repeated trials to be satisfactory for the purpose. The particulars of a test recently made under the supervision of Mr. O. B. Potter, of New York, on the site of the old World Building, may be of interest to our readers. A small York, on the site of the old World Building, may be of interest to our readers. A small building was erected, with walls of brick. It was covered with wooden beams, and common wood furring strips were run crosswise, to which was fastened the wire lath. Two coats of mortar were applied in the usual manner and allowed to dry. On the day appointed for the trial a very hot wood fire was kindled and kept to the highest point for two hours by frequent replenishing. The fire was then allowed to go down to facilitate investigation. It was found that the second coat of mortar, which had been artificially dried, had scaled off, but that the scratch coat was intact, not even a crack being visible. The original intention was to have ended the test at this point, but it was determined to proceed to a still severer trial. Accordingly, the fire was again built, and wood was supplied for 49 minutes longer, the wood was supplied for 49 minutes longer, the fire burning on the second trial for an hour, making in all something over three hours, during which the ceiling was exposed to a more intense heat than would ordinarily be experienced in a burning building. At the end it was found that the plaster had fully protected the wooden beams, demonstrating that the amployment of wire lath will serve that the employment of wire lath will serv that the employment of wire lath will serve to confine a fire to the apartment in which it originates. The manufacturers of the material thus tested, the Clinton Wire Cloth Company, of Clinton, Mass., with branch offices in New York, Boston and Chicago, hold patents for improvements which materially reduce cost. They put forward hold patents for improvements which materially reduce cost. They put forward the statement that it only adds from one-tenth of 1 per cent. to the cost of a building in comparison with wood lath, while it materially reduces rates of insurance. The further claim is made for it that ceilings in which it is used will not crack, and that, therefore, it is specially adapted for fine work. We are informed that it is used in the buildings erected by the Astor and Stewart estates. erected by the Astor and Stewart estates, and that it is employed in the Vanderbilt

Nickel Discoveries.

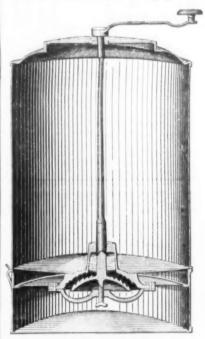
It has long been known to intelligent prospectors that nickel is associated withouther metals in the metaliferous veins traversing the metamorphosed granite, quartz diorite and slate belt (from three to seven miles in width) separating the quartz-por phyry that skirts the volcanic valley of Mono Lake from the hornblendic or cynetic granite constituting the summit of the Sierra Nevada chain, and extending from Green Fork of Rush Creek, south of Mount Lyell, a distance of 25 miles or more. Float rock carrying from 8½ to 9½ per cent. of nickel. \$15 to \$18 per ton in silver and a trace of gold has been found in considerable quanti-ties on Virginia Creek, near the base of Lifting and Lowering are effected by means of the Winch.

tes on Virginia Creek, hear the base of Castle Peak, and it was probably the presence of a large percentage of nickel that prevented the successful working of the rich auriferous ores of the Dunderburg mine, at the northern base of that peak, years ago. In some places along the outcrop of the Sheepherder lode of the Great Sierra Company, on Tioga Hill, 12 miles further south, where the slate has displaced the granite of the summit, and crossed diagonally over the western slope nickel, it is also found in considerable quantities; but the shaft sunk over the tunnel shows that it does not occasional trace of this metal is also found in the free gold ores of this district. Andrew Thompson and John Hall have recently made a discovery on Iron (or White Wolf) Mountain, five miles south of Tioga Hill, which tain. The miles south of 110ga fill, which bids fair to prove the veta madre of nickel in this section. They sunk down on the solid vein about 15 feet, and cross-cut 14 feet, without finding any traces of either wall. The lode is on a gentle slope of a low slate mountain, the surface of which was polished Mount Lyell and eroded the cafion or valley now occupied by the Dana Fork of Tuolumne, but this surface has since weathered until it is covered with sufficient soil to support a heavy forest of pine, and hence the outline of the lode cannot be traced on the surface, but the indications are that it is 60 feet wide. So far as the vein has been opened, the ore appears to be of very uniform grade, except a few small streaks of Albany and barren quartz, and an average sample sent pany, Troy.

of the cost of a large bridge to keep it in good condition. The bridge has safely supported a load of 22 tons on one wagon, but the engineers advise the directors to refuse as they did not get returns from the assayer until they came in, but were drilling away through the "iron" in search of silver.

Combined Coffee Canister and Mill.

Messrs. Norton Bros., of 40 to 46 River street, Chicago, have a very complete line of special tin goods adapted to the grocery and hardware trade. A very neat catalogue is-sued by this firm, a copy of which reached us some time since, shows many goods not ordinarily kept in stores, and yet for which there is a well defined demand. Am ng these may be mentioned sample cases with removable pans, constructed with provisions for tags and cards, and all arranged in a very compact shape and well adapted to the special purposes for which they are intended. view, a combination article belonging to the



Combined Coffee Canister and Mill.

general line of goods we have mentioned, and upon which we understand a very satisfactory trade has already been established. It may be described as a combined coffee canister and mill. Our engraving clearly hows the arrangements of the parts. The hows the arrangements of the parts. The handle by which the mill is operated is loose, and after it is taken iff there is no difficulty in removing the top of the can. By means of grooved projections stamped in the breast of the can and also in the rim of the cover, but reversed, the latter locks on to the former by merely turning it a slight amount. By this means the coffee is shut up in a receptacle that is practically air-tight. The adjustment of the mill is effected by means of a screw projecting from the bottom in the natment of the mill is effected by means of a screw projecting from the bottom in the ordinary way. The ground coffee falls into a pan-like vessel, which is hinged to the bottom of the can and he'd in position when shut by a spring catch, shown at the left. Only so much coffee is ground from time to time as is required for use. The whole construction is neat and workmanlike in all re-

The Nail Mills of the United States.

The Bulletin of the American Iron and Steel Association prints the following directory of the nail mills of the United States, compiled by Mr. James M. Swank. The information was gathered direct from the nail makers and is probably complete and accurate. The capacity of each works is given in keys of the property. given in kegs of 100 pounds :

Maine.

Pembroke Iron Works, James C. Warr, Pembroke. Number of nail machines, 30. Annual capacity, 30,000 kegs of iron and patent iron-steel nails.

Massachusetts.

East Bridgewater Iron Company, Rogers & Sheldon, East Bridgewater. Office, 8t Water street, Boston. Number of nail machines, 26. Annual capacity, 32,000 kegs

of cut noils.
Fall River Iron Works, Fall River Iron Works Company, Fall River. Number on all machines, 105. Annual caracity, 160. 000 kers of cut nails. Adding to more nail Gesnold Mills, New Bedford, Propose

adding to nad machines to their rolling mill, to have an annual capacity of 4500 kegs of Mount Hope Iron Works, Somerset. Num-

ber of nail machines, 58. Annual capacity, 72,000 kegs of cut nails.
Parker Mills, Bridgewater Iron Company, Wareham. Office at Bridgewater. Number of nail machines, 69 Annual capacity,

120,000 kegs of cut nails. Robinson Iron Company, Plymouth. Number of nail machines, 18. Annual capacity,

25,000 kegs of cut usils.
Somerset Iron Works, Old Colony Iron Company, Somerset. Office at Taunton. Number of nal machines, 70. Annual capacity,

Tisdale Nail Works, William E. Coffin & Co., East Wareham. Office, 8 Oliver street, Boston. Number of nail machines, 80. Annual capacity. 70,000 kegs of cut hals. Has been idle for many years. Tremont Nail Works, Tremont Nail Com-

Tremont Nail Works, Tremont Nail Company, West Wareham. Number of nail machines, 75. Annual capacity, 100,000 kegs of patent iron-steel nails.

Wareham Nail Company, South Wareham. Number of nail machines, 33. Annual capacity, 65,000 kegs of cut nails.

Weymouth Iron Company, East Weymouth. Number of nail machines, 82. Annual capacity, 106,000 kegs of cut nails.

New York New York.

Albany and Renselaer Iron and Steel Com-any, Troy. Number of nail machines, 45. to San Francisco for analysis gave a return Annual capacity, 40,000 kegs of steel nails.

D. SMITH &

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Manufacturers of the

BEST QUALITY CARRIAGE MAKERS' HARDWARE,

Manufacture the Largest Variety of Forge Carriage Irons, of Best Material and Workmanship.

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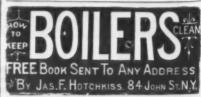
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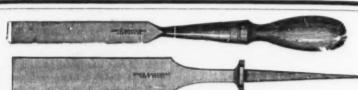
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of nail machines, 150. Idle since 1876. Cumberland Nail and Iron Company Bridgeton. Number of nail machines, 84.

Annual capacity, 140,000 kegs of cut nails.

Oxford Iron and Nail Company, Oxford. Number of nail machines, 103. Annual capacity, 250,000 kegs of cut nails.

Pennsylvania.

American Iron Works, Jones & Laugh-lins, Pittsburgh. Number of nail machines, Annual capacity, 150,000 kegs of cut nails and spikes.

Anchor Nail and Tack Works, Chess

Cook & Co., Pittsburgh. Number of nail machines, 96. Annual capacity, 250,000 kegs of cut nails and spikes.

Atlantic Iron and Nail Works, P. L. Kimberly & Co., Sharon. Number of nail machines, 40. Annual capacity, 75,000 kegs of cut nails

chines, 40. of cut nails.

Bellefonte Rolling Mills and Nail Factory. Bellefonte Nail Company, Limited, Belle-fonte. Number of nail machines, 30. An-

nual capacity, 65,000 kegs of cut nails.

Birdsboro Nail Works, E. & G. Brooke
Iron Company, Birdsboro. Number of nail
machines, 100. Annual capacity, 240,000
kegs of cut nails. Cambria Iron Company, Johnstown. Pre-paring to engage in the manufacture of steel

Chesapeake Nail Works, Chas. L. Bailey & Co., Harrisburg. Number of nail ma-chines, 103. Annual capacity, 275,000 kegs of cut nails.

Clinton Rolling Mill, Graff, Bennett & Co. Pittsburgh. Number of nail machines, 41.

Not running nail machines.

Danville Nail Works, Danville Nail and Manufacturing Company, Danville, Montour County. Built in 1882-83, and first put in operation August 31, 1883. Number of nail machines, 15. Annual capacity, 60,0000 kegs of cut nails and spikes.

Duncannon Iron Company, Duncannon. Office, 122 Race street, Philadelphia, Number of nail machines, 64. Annual capacity, 140,000 kegs of cut nails.

Etna Iron Works, Limited, Newcastle, Lawrence County. Number of nail machines.

Lawrence County. Number of nail machines, 55. Annual capacity, 120,000 kegs of cut nails Harrisburg Nail Works, McCormick Es-

tate, Harrisburg. Works at Fairview, Cumberland County. Number of nail machines, Annual capacity, 175,000 kegs of cut Hollidaysburg Iron Works, Hollidaysburg Iron and Nail Company, Hollidaysburg. Number of nail machines, 22. Annual ca-

pacity, 60,000 kegs of cut nails and spikes.
Juniata Iron and Steel Works, Shoenberger & Co., Pittsburgh. Number of nail
machines, 92. Annual capacity, 225,000
kegs of cut nails. Juniata Rolling Mill, McLanahan, Smith

& Co., Limited, Hollidaysburg. Number of nail machines, 30. Annual capacity, 60,000 kegs of cut nails. Kensington Iron and Steel Works, James

Rowland & Co., 920 North Delaware avenue, Philadelphia. Number of nail machines, 38. Annual capacity, 60,000 kegs of cut nails.

Milton Nail Works, C. A. Godcharles & Co., Milton. Number of nail machines, 75.

Annual capacity, 130,000 kegs of cut nails.

Northumberland Iron and Nail Works, Van Alen & Co., Northumberland. Number of nail machines, 30. Annual capacity, 70,000 kegs of cut nails.
Portage Iron Company, Limited, Duncans

ville. Number of nail machines, 37. Annual capacity, 60,000 kegs of cut nails.

Pottstown Iron Company, Pottstown.
Number of nail machines, 79. Annual capacity, 300,000 kegs of cut nails. Adding 20 more nail machines.
Reuben Johnson & Co., Northumberland.

Building a nail works to contain about 36 nail machines, to have annual capacity of 75,000 kegs of cut nails. Will go into opera-Sable Iron and Nail Works, Zug & Co., Pittsburgh. Number of nail machines, 60.

Annual capacity, 120,000 kegs of iron and ron-steel nails Sharon Iron Company, Sharon. Number

of nail machines, 46. Annual capacity, 90,000 kegs of cut nails. Intend to add 18 more nail machines. ngo Iron Works, Newca

ber of nail machines, 55. Annual capacity, 150 000 kegs of cut nails.

Standard Nail and Iron Company, Williamsport Works at Crescent. Number of

nail machines, 17. Annual capacity, 30,000 kegs of cut nails Sunbury Nail Works, Sunbury Nail, Bar and Guide Iron Manufacturing Company, Sunbury. Built in 1883, and first put in operation August 29, 1883. Number of nail

machines, 25. Annual capacity, 60,000 kegs of cut nails. Towanda Nail Works, R. A. Bostley & Co.,

Towanda Nail Works, R. A. Bostley & Co., Towanda. Number of nail machines, 26. Annual capacity, 60,000 kegs of cut nails. Vesuvius Iron and Nail Works, Moorhead Brothers & Co., Pittsburgh. Number of

hail machines, 49. Annual capacity, 94,000 kegs of cut nails.

Williamsport Rolling Mill and Iron Works,
Milton Iron Company, Williamsport. Nail
plant added in 1882-83. Number of nail machines, 50. of cut nails. Annual capacity, 95,000 kegs

Virginia.

Graham & Robinson, Graham's Forge. Number of nail machines, 5. Have been idle for many years, and will probably never make nails again.

James River Iron Works, four miles above

Lynchburg. Works purchased by A. H. Leftwich, who will convert them into a nail

works.

Old Dominion Iron and Nail Works,
Richmond. Works on Belle Isle. Number
of nail machines, 100. Arnual capacity,
300,000 kegs of cut nails.

West Virginia,

nails next spring.

Sable Iron Works, J. & J. Rogers Iron Company, Ausable Forks. Number of nail machines, 10. Nail department idle. Will probably never make nails again for the market.

New Jersey.

Number

Benwood Iron Works, Benwood, County. Office at Wheeling. Number of nail machines, 124. Annual capacity, 308, 000 kegs of cut nails. Erecting Bessemer steel works, to consist of two 4-ton converters, to produce steel for the manufacture of steel nails. Expect to add 16 more nail machines before the close of this year.

steel nails. Expect to add 16 more nail machines before the close of this year.

La Belle Iron Works, Wheeling. Number of nail machines, 122. Annual capacity, 275,000 kegs of cut nails and spikes. Riverside Iron Works, Wheeling. Number of nail machines, 126. Annual capacity, 325,000 kegs of cut nails. Will add 18 more nail machines this year. nail machines this year. Erecting Besse-mer steel works, to consist of two 4-ton converters, to produce steel for nails

Standard Nail Works, Standard Nail and Iron Company, Clifton. Number of nail machines, 76. Annual capacity, 150,000 kegs of cut nails and spikes. Will add 49

more nail machines this year.

Top Mill, Wheeling Iron and Nail Company, Wheeling. Number of nail machines, Annual capacity, 260,000 kegs of cut nails. Alabama.

Brierfield Coal and Iron Company, Brier field. First nails made in September, 1883. Number of nail machines, 60. Annual capacity, 160,000 kegs of cut nails. Intend to add 40 more nail machines.

Kentucky. Norton Iron Works, Ashland. Number of nail machines, 94. Annual capacity, 275,ooo kegs of cut nails.

Tennessee

Knoxville Iron Company, Knoxville. Number of nail machines, 41. Annual capacity,

75,000 kegs of cut nails.
South Tredegar Iron Company, Chattanooga. Number of nail machines, 71. Annual capacity, 190,000 kegs of cut nails.

Ohio.

Belfont Iron Works, Belfont Iron Works ompany, Ironton. Number of nail ma-Company, Ironton. Number of nail machines, 126. Annual capacity, 300,000 kegs of cut nails.

Bellaire Nail Works, Bellaire. Number of nail machines, 124. Annual capacity, 338,-coo kegs of cut nails and spikes. Erecting Bessemer steel works, to contain two 4-ton converters, to produce steel for the manu-

facture of steel nails.

Falcon Iron and Nail Works, Falcon Iron and Nail Company, Niles. Number of nail machines, 44. Annual capacity, 100,000 kegs of cut nails.

Jefferson Iron Works, Steubenville. Number of nail machines, 115. Annual capacity, 340,000 kegs of cut nails. Intend adding 20 more nail machines.

Junction Iron Company, Mingo Junction.
Office, Wheeling, W. Va. Nail mill built in
1882, and put in operation November 30,
1882. Number of nail machines, 126. Annual capacity, 300,000 kegs of cut nails and spikes.

Kelly Nail and Iron Company, Ironton.

Built in 1883, and first put in operation in November, 1883. Number of nail machines, Annual capacity, 200,000 kegs of cut

nails and spikes.

Laughlin Nail Company, Martin's Ferry.

Office, Wheeling, W. Va. Number of nail
machines. 114. Annual capacity, 312,000 kegs of cut nails and spikes.

Mahoning Iron Works, Brown, Bonnell & Co., Youngstown. Number of nail machines,

Annual capacity, 130,000 kegs of cut nails Spaulding Iron Company, Brilliant Built in 1882-83, and will be put in operation during the present month. Number of nail machines, 60. Annual capacity, 180,000 kegs. Prepared to make both iron and steel nails.

Indiana. Aurora Iron Mills, Cobb's Iron and Nail ompany, Aurora. Number of nail ma-Company, Aurora. Number of nail machines, 37. Annual capacity, 104,000 kegs of steel and combined iron and steel nails.

Intend to add more nail machines soon Greencastle Iron and Nail Company, Greencastle. Number of nail machines, 45. Annual capacity, 100,000 kegs of cut nails

and spikes Terre Haute Iron and Nail Works, Terre Number of nail machines, Annual capacity, 325,000 kegs of cut nails.

Illinois.

Belleville Nail Company, Belleville. Number of nail machines, 72. Annual capacity, 150,000 kegs of cut nails.
Calumet Iron and Steel Company, Cum-

mings. Office, 57 Dearborn street, Chicago. Number of nail machines, 115. Annual capacity, 300,000 kegs of iron and steel nails. Centralia Iron and Nail Works, Centralia. Number of nail machines, 36. Annual ca-

pacity, 90,000 kegs of cut nails.
Western Nail Company, Belleville. Nail mill built in 1882, and first put in operation September 4, 1882. Destroyed by fire April September 4, 1882. Descroved by fire April 25, 1883, and rebuilt and put in operation June 25, 1883. Number of nail machines, 72. Annual capacity, 180,000 kegs of cut nails. Will add 54 more nail machines be fore the close of this year.

Wisconsin

North Chicago Rolling Mill Company, Bay View. Office, Milwaukee. Have commenced the erection of a nail mill to contain 100 nail machines, to be completed by January 1, 1884. They will have an annual capacity of 350,000 kegs of iron and steel nails.

Nebraska Omaha Nail Works, John D. Creighton,

Omaha. Number of nail machines, 26. Annual capacity, 60,000 kegs of cut nails. Colorado.

Colorado Coal and Iron Company, South Pueblo. Number of nail machines, 27. Annual capacity, 120,000 kegs of cut nails.

Pacific Iron and Nail Company, Oakland. Built in 1882-83. Number of nail machines, 70. Annual capacity, 150,000 kegs of cut

Compared with last year, the imports of iron and lead show a heavy decline, while steel is coming over in much larger quanti-ties. Tin imports are about the same in quan-Belmont Nail Company, Wheeling. Number of nail machines, 131. Annual capacity, ties. Tin imports are about the same in quantity, except as to slabs, which are increased about 20 per cent. Imports of cutlery and hardware are almost nominal.

The Iron Age

Metallurgical Review.

New York, Thursday, November 15, 1883.

DAVID WILLIAMS, JAMES C. BAYLES, JOHN S. KING.

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Proposed Mexican Reciprocity Treaty

By an amendment to the Mexican consti tution, to take effect December 1, inter-State customs duties are abolished, thus removing a serious impediment to foreign trade. This obstacle, together with the lack of means of transportation, has been almost prohibitory in its effects upon trade with the great mass of population distant from the seaboard, who were well-nigh inaccessible. The several Mexican States are at present so far dependent for revenues upon the right to levy taxes on imports, in addition to customs duties collected by the General Govern me it, that at the last advices an assembly of from all parts of the Republic wer deliberating upon a scheme of local taxation, designed as a substitute for sources of reve nue which cease under the new Constitutional amendment. In anticipation of these changes and in order that merchants in the United States may be prepared to take advantage of improved trade facilitie-, Consul-General Sutton, at Ma:amoras, has carefully examined the propose I commercial treaty between the United States and Mexico, and transmitted the results to the State Department at Washington. His report is based upon the imports for the year ending June 30, 1882, and he answers in the affirmative the two important questions, viz.: I. "Does the United States receive concessions equal to " or greater than those which are conceded ? 2. " Will the treaty benefit our export trade to Mexico?" These points he sustains by referring to the promised aboution of the heavy inter-State duties, sometimes ranging as high as 12 per cent.; also to the more amicable relations which will arise from the simple fact that a treaty exists. Moreover, the strenuous opposition experienced from Eur pean traders of all classes is of itself sati-factory evidence that the treaty would work beneficially for us. Mr. Sutton says the utmost care has been taken with the tables to make them reliable, and he has especially endeavored not to overestimate the promised

of duty. Of the rest, \$2,470,973 was represented in five articles—sugar, hemp, istle, which we present in the following table: tobacco in leaf, and fruits, and the amount of No. com. No. nail Annual caduty to be remitted by the United States is but \$179,075. The duties on sugar were \$75,000. The fear that Mexican sugar would flood our markets in case the treaty is adopted is shown to have no foundation. Only 15 of 1 per cent. of our imported sugar comes from Mexico, and if we should take the entire amount exported from that country, it would make but 1/4 of 1 per cent. Favorable circumstances might increase the product of sugar in Mexico. Export duties and the increasing home consumption, however, in Mr. Sutton's opinion, will prevent any great increase of the export to this country. Against the \$179,075 remitted by this Government, Mexico would have to concede duties amounting to \$742,980, or \$668, 116 when reduced to our money. Of this, \$425,000 is levied on petroleum, for which, with the duty raised, there would be a heavy d mand. The next largest item is for carriages, \$157,500, and with that impost abol ished we should have a monopoly of the car riage trade in Mexico, while in machines, tools, clocks, steam engines and stoves we should gain the trade now carried on by England. The direct cash difference in our favor would e \$489,041, while, as Mr. Sutton says, "In the great struggle for Mexican trade we have the advantage of location and railway connections, but with the low rates of interest, the low prices at which they can sell their goods, their quick and cheap ocean freights, and the skill and perseverance with which Europeans prosecute the work, we shall need all our advantages to keep the ascendancy. It is only recently that we have put forth active and intelligent efforts to get our share. This treaty is one of the most vital factors."

According to present indications, the proosed reciprocity treaty will come before Congress early in the coming session, as it is important to the interests of all concerned that decisive action be taken, if for no other reason than that by December 1, 1884, two great trunk lines of railway-the National and the Central—will probably be finished to the Mexican capital. At the same date the International Exhibition of Mexican products will be opened at New Orleans.

The Nail Trade.

The Secretary of the American Iron and Steel Association has just published authentic information concerning the nail factories of the United States, as they exist at the present time, which we reproduce in another part of this issue. The publication of this information is timely, as everybody connected with the trade knows that since the appearance of the last official statement of this kind many new nail machines have been put in peration, especially in the West, but very few persons were aware of the exact extent of the additions thus made. In August, 1882, there were 68 nail factories, which contained 4167 machines, having an estimated capacity of 9,500,000 kegs of nails per annum. There are now 74 factories, contain ing 5008 machines, with an annual capacity of 11,376,000 kegs. Five more works are in progress of erection, to contain at least 200 machines, and 391 machines are being added to existing factories, all of which will probably be completed by the 1st of January, when there will be a total of 5599 machines in 79 works. Basing an estimate on existing factories, the capacity of the country on the 1st of January will be about 12,500,000 kegs of nails per annum.

These figures of capacity, we understand. are based on the very best work of which an establishment is capable, running every working day of every month in the year. This, however, is so rarely accomplished in actual practice, no matter how high the price of nails may be, that 20 per cent. can safely be deducted from these totals in order to pproximate actual capacity. This would leave 7.500,000 kegs as the annual capacity in August, 1882, against 10,000,000 kegs at the close of this year, which is an increase of 331/2 per cent, in less than a year and a half. The following table shows where the nail factories of the country are located, the number in each State, the number of machines in completed works, the annual capacity of the works, and the number of chines to be added :

States.	Number of com- pleted works.	Number of nail machin's Nov. 1.	Annual capac'y in kegs.	Nail machin's to be added.
Waine Wassachu'te Wassachu'te New York New York New Jersey Pennsylva'ia Vir Inia W Virrinia Alabama Kentucky Tennessee Ohio Inotana Jilinois Wisconsin Neberaska Colorado Califoruis Machines to be added (est d.)	10 10 22 33 37 27 28 60 11 12 9 9 3	30 616 55 337 1,425 10:9 60 94 112 20:8 20:5 20:5 27	80,000 875,000 670,000 6,000 1,668,000 1,668,000 190,000 267,000 267,000 629,000 629,000 120,000 120,000	20 74# 88 40 20 4 54 10J
Total	74	5,008	11,376,000	591

As there is a well-defined distinction be tween the Eastern and Western nail trade, Brie ly epitomized, the more general state- the Allegheny Mountains being considered ments in Con-ul-General Sutton's communi- the dividing line, and Virginia the only Jay Cooke, of Philadelphia, the well-known cation may be given as follows: The total Southern State included with the East, we financier, is interested in this enterprise. value of goods imported from Mexico was have ascertained the number of works in It is possible that legal complications with \$6,376,165, of which \$3,895,147 are now free each of these sections, together with the Mr. Reese may annoy the Harrison Steel

number of nail machines and their capacity,

Annual ca-pacity in Chines to No. nail 591 Total..74 5,008 11,376,000

From this table it will be observed that almost two-thirds of the present nail-producing capacity of the country is located west of the Allegheny Mountains, and by the 1st of January that section will have over twothirds. This accounts for the importance attached to movements in the Western nail trade. If Western factories were to run steadily up to their full capacity, they could almost, if not quite, supply all the nails which this entire country requires. The production of the United States has never exceeded 6,147,097 kegs, which was the product of 1882.

In the published list of nail factories some curious points appear. Four works make patent combined iron and steel nails-the Pembroke Iron Works, Maine; Tremont Nail Works, Massachusetts; Sable Iron and Nail Works, Pennsylvania, and Aurora Iron Mills, Indiana. Three make steel nails-the Albany and Rensselaer Iron and Steel Company, New York; Aurora Iron Mills, Indiana, and Calumet Iron and Steel Company, Illinois. Three works are erecting Besseme steel plants, each consisting of two 4-ton converters, to make steel expressly for nails-the Benwood Iron Works, West Virginia; Riverside Iron Works, West Virginia, and Bellaire Nail Works, Ohio. Four works are making preparations to manufacture steel nails—the Belmont Nail Company, West Virginia; Cambria Iron Company, Pennsylvania; Spaulding Iron Company, Ohio, and North Chicago Rolling Mill Company, Wisconsin. The Belmont Nail Com-pany, of West Virginia, have the largest number of nail machines of any active establishment in the country, 131; the Boonton Iron Works, of New Jersey, which are credited with 150 machines, not having been in operation for seven years. The Riverside Iron Works, West Virginia; Belfont Iron Works, Ohio, and Junction Iron Company, Ohio, come next, with 126 machines In a short time, however, the Riverside Iron Works will go to the front, as 18 machines are to be added to its plant, which will then embrace 144 machines.

Although these facts, which show very remarkable development in this branch of the iron trade, are therefore gratifying to all who are sentimentally interested in national growth, they are full of ominous meaning to those actually engaged in the nail trade. The experience of the past year, with its numerous attempts to restrict Western production inside of manageable bounds, is not favorable to the absorption by the country of greatly increased quantities of nails, such as the factories are now, or shortly will be, able to turn out. Prices may be held at a satisfactory figure by a continuation of the restrictive policy until the demand more closely approximates the supply, but the issue is a doubtful one in view of the new elements being infused into the trade.

The Reese Basic Patents Litigation.

The Pittsburgh Dispatch for the 7th inst. states that negotiations have for some time been in progress between the Bessemer Steel Company, Limited, of Philadelphia, and Mr. Jacob Reese, of Pittsburgh, involving the settling of the suits now pending over the ownership of Mr. Reese's patents for the manufacture of steel by the basic Bessemer process, but Mr. Reese has refused to accept the proposition of the company. same time information reaches us from St. Louis to the effect that the Bessemer Steel Company have compromised their suit with the Harrison Steel Company, of St. Louis. It will be remembered that about two

years ago the announcement was made that ison Steel Company had b tain patents pertaining to the manufacture of basic Bessemer steel of Mr. Jacob Reese, of Pittsburgh. Prior to that time Mr. Reese had sold certain other patents pertaining to the same process to the Bessemer Steel Company, Limited, and litigation followed. The latter company entered suit in the United States Court in St. Louis last spring against the Harrison Steel Company, to prevent their making use of the Reese patent. About a month ago, it is reported, the suit was dismissed without prejudice on a demurrer filed by the defendant, claiming that Mr. Reese should have been made a co-defendant. After the dismissal of the suit, negotiations were opened between the Harrison Steel Company and the Bessemer Steel Company, which have just resulted in a license to the former company for the use of the Reese patent on a royalty basis. This leaves the Harrison Steel Company free to go on with the erection of their plant at Harrison, Ill., a few miles from St. Louis. The company had been organized, with a capital of \$3,000,-000, and had commenced work when stopped by the suit. Works will now be erected at Harrison, to manufacture basic Bessemer steel on a large scale for plates, sheets, rods, bars, &c., but, it is understood, not for rails. The plant will embrace blast furnaces, as well as steel-converting works, so as to control the entire process from the ores to the finished product. It is understood that Mr.

Company to some extent, although we are assured by a gentleman who is conversant with the facts in the case that the company will erect their works, nevertheless. question of the proper parties to receive the royalty will be settled by the courts, but there is apparently now no ground for interference with the actual erection of the

The basic process has for several months been in use by the Pennsylvania Steel Company at Harrisburg, Pa., and a few days ago Mr. Reese notified the company that unless they stop infringement upon his patent he will enter suit. It is said that a bitter fight over the coveted patents is imminent, and we do not doubt the statement, as we know of several establishments which have for a long time been anxious to manufacture steel by the basic process, but are unable to secure licenses to that effect from the Besse mer Steel Company. If the ownership of the patent is decided to be vested in Mr. Reese, he will, of course, issue licenses to all applicants, but the policy of the Bessemer Steel Company has been conspicuously restrictive.

The Condition of Trade

There have been no exciting or sensational ccurrences in the iron and steel trades durng the past week, but, on the contrary, a dead level of dullness has prevailed. In pig iron the movement was generally sluggish, and while some establishments enjoyed a fair trade, others did but a small amount of business. Theoretically, the pig-iron trade is in good condition, as production is not excessive, stocks are light, foreign iron is out of the market, and consumption continues to be of quite fair proportions, but practically there appears to be a limited demand, sellers are more numerous than buyers, and prices. while not weak, have no suggestive strength. The desired upward tendency has not shown itself, and until it appears buyers will not be ager to fill their yards. They are still very willing to let the furnace companies carry the stocks which they themselves ought to Manufactured iron did not move freely during the time under review. The stores did not do even an average business, and the large buyers showed no disposition to take hold at present prices. Bar iron is still sadly demoralized, and prices are nominal, depending entirely upon the size of the order, the character of the specifications and the pecessities of the seller. Sheet and plate iron were both very dull, and there is no sign of improvement. Nails exhibited decided indications of lower prices, and if Western factories are not stopped for a few weeks, much lower rates will be feared.

Although rumors have been quite extensively circulated to the effect that large quantities of steel rails were sold last week, the orders placed were comparatively small, the decline in price of the previous week not having induced the business that was anticipated. There are heavy orders in sight, but protracted negotiations may have to be conducted before they are placed. Yet it is not expected that rails will be sold below \$35. There is a great deal of close figuring on items of cost now being done by the steelrail mills, and it is likely that very few of them can show a profit at present figures. Wages will very probably be reduced at most of them this winter. It is reported that both the Edgar Thomson and the Cambria works are considering the wages problem, and the managers of the Troy works say they are willing to run at cost, or a shade below it, to keep their men employed and to retain their organization. Workingmen should be willing to make a fair conces sion to the urgency of the situation, and should agree to work at such wages as will permit their employers to continue opera tions. "Half a loaf is better than no bread.

October Imports of Iron and Steel.

The imports of iron and steel at the port of New York were lower in the October than in September. The difference between the imports of the two months amounted to nearly 5000 tons, excluding tin plates, but, including them, the falling off was barely 3000 tons. The changes in the movement of the two months are fully set

,	-	ons.	
rig iron	de,	ptember. 10.441	October.
piegeleisen		7,890	9,275
wedish iron	0	1.878	3.040
iteel wire rods		8,041	2,117
iteel rails	0	8,019	1.411
crap iron	٠	3,622	1,238
tussia sheet iron	9	125	855
crap steel		690	771
old rails			701
teel bars, &c		547	474
teel tires and forgings	0	485	484
heet iron		430	410
ron wire rods		873	800
ron tubes			140
ron bars, &c		88	141
ew iron rails			75
teel blooms		18	40
ron beams		60	None.
Ioop iron		848	None.
toop nom	٠.	080	Mone.
Total, except tinplates		55.518	28,869
in plates		9,922	11,815
and produced the control of the cont	٠.	0,10000	AA,CAO
Total	. 4	48,440	40,684
The imports of iron ore			

ring carrie :		
Iron ore	eptember. 2,355 1,064 168	October. 2,704 871 101
SpelterScrap zine	59 10	None
Old copper	2,650	Pounds. 7,690 7,852
Old leadSheet zinc	none 88,808	6,063 358,529
Regulus antimony	98,000	110,400

The exports of metals from New York in the two months referred to were as fol-

Pig iron	September. October
Steel rails	900
Iron rails	
Iron bars, &c	
Tin plates	470
Ingot copper	DMA 10
Old brass	. 35 None
	Pounds. Page 1
Slab and ingot tin	. 11,000
Spelter	
Shoot a'm	9.7
Sheet zin	. None 2 m

The stocks of iron and steel held in the archouses of the United States at New York, Boston, Philadelphia, Baltimore and New Orleans, on the 1st of November, were

New York.	Gross tons- Other ports. 2,400 1,140 1,165 1,457 None 100 525	Total, 3,513 1,735 2,341 906 100 646
Total 5,058	6.787	11 00

As compared with the total stocks held on the 1st of January, these figures show a shrinkage of 17,418 tons.

Developments in the European and American Copper Markets.

The recent downward tendency in the European copper markets invites attention to the English statistics, as furnished us by our Liverpool correspondent. The comparative importations of copper produce into Liver. pool and Swansea for the years ending September 30, 1882, and September 30, 1883 were as follows:

From	1892.	1888.	Inc.	Dec.
	Tons.	Tons.	Tons.	Tons
The United States	727	6,289		
Canada	284	897	118	
Texico	211	630	419	
Peru	416	419	8	
River Plate	318	401	83	
New Quebrada	3,862	8,872	10	
ape	5,525	7,006	1,481	
pain	480	1,269	787	
panish Precipitate	5,887	10,405	1,518	
faly	764	512		25
ewfoundland	1,761	1,858		-50
orway	406	865		- 4
ustralia	251	194		5
ortugal	31	188	107	
undries	1,649	1,489		16
Total	25,574	84,789	10,063	91
hill	27,682	80,123	2,441	
ustralian, &c., into Lon-		,		
don	10,323	8,689		1,68
Grand total	63,579	73,551	12,524	2,5%

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The import of copper produce for the year ending September 30 last, says our correspondent, as compared with the previous 13 months, has been very carefully made up You will notice the large increase in the im port from the United States, Spain and the Cape. Values with us have given way very considerably during the first fortnight in October, to the extent of about 30/ per ton This appears to be chiefly due to the fact that some of the large holders have lost faith in the future of the market, and have commenced to sell a portion of their stocks. This is hardly surprising, as the import into England during the past 12 months has exceeded that of the previous 12 months by about 10,000 tons fine, as the above table shows. On the other hand, however, the consumption has also largely increased. The future of our market mainly depends upon the supplies from the United States. If they continue on the same scale as of late, we shall doubtless see lower prices.

The following table shows stocks and con sumption in England and France of English copper and English exports for three years,

1863.	22=	rease 8,518	25,490 1,798 53	81,336	1 :::	15,815	16,027	90,637
	\$2,623 86,141	Incre	:::	:	9,504 9,203	1 : :	:	
1859.	111	3,676	81,918 1,826 42	\$5,781	::	11,568	19,060	17,078
18	85,806	***	:::	#2 #3 #4 #	3,437	::	*****	****
31.	11	2,318	21,738 1,924 354	21,041	1 ::	12,52N	18,100	19,340
1881	Stocks, all kinds, in England, Jun 1st 41,805 Sept 30th. 38,477	Decrease	Home consumption of foreign. Produce of Cornish mines. British ores sold at Swansea	Apparent home consumption	Stocks of all kinds in France Jan, 1st 6,462	Import into France direct.	French consump'n (excl. of English import)	" (incld'g. import of English)
	Stocks,		Home of Produce British o	Apparet	Stocks o	Import i	French	**

tion during the first nine months appears as

under: Consumption in England Consumption in France	1881. Tons. 24.041	1882. Tons, 33,791 17,078	1: 83. Tons. 81,339 80,837
Total	43,381	50,652	52,175
Consumption in Engls	and and	Franc	e has
therefore been about	20 per	cent. g	reater
during the first nine			2 and

Our correspondent remarks that the course of prices on the other side will greatly depend on the magnitude of further shipments to this country. On this subject we

ments with manufacturers till the end of the year. Prices would have to improve a good deal in January and February to induce shipments this way by rail from the Lake region; hence Lake copper may be left out of the calculation till the spring months. As for ingot copper and furnace material from the Southwest, it is safe to assume that the consignments to England will continue unabated unless partially interrupted by the difficulties of transportation to the railroad depots during the winter. The freight rates by rail will not deter shipments even in winter if the smelting in England leaves a good margin for profit. We are now enterng on a dull period in the copper and general metal trade, and therefore do not anticipate much change in prices either way. In England, where the speculative element so largely prevails in the copper market, we can foresee a good deal of fluctuation, the recent heavy failures having created a feeling of restlessness and uncertainty, not only in England, but throughout Europe.

Piracy of trade-marks has repeatedly attracted attention both here and abroad, but, notwithstanding the heavy penalties imposed in a few cases, the practice has not vet been entirely suppressed. Thus, United States Consul Van Riper, at Moscow, Russia, in a recent report remarks that, in trying to introduce American tools at different Russian establishments, he invariably encountered "American articles" of foreign manufacture, principally from Germany, bearing American trade-marks. Although the genuine American implements were of superior workmanship, it was found an extremely difficult matter to effect sales, the very much inferior imitations being offered at greatly lower prices. As a Russian will always buy that which is cheapest, regardless of quality, it is evident that American goods in that market labor under a serious disadvantage. We hope, however, that no effort will be made to extend our Russian trade by lowering the quality standard. Cut-throat trade of this kind soon becomes ruinously unprofitable, and the less our manufacturers have of it the better for them. It would be much better to take steps to secure the adequate protection of their trade-marks abroad, and to build up such trade as highquality standards will command.

The fact that the water in the various streams of the New England States has been exceptionally low during this season again directs attention to the necessity of gradually substituting steam for water-power. A number of causes have conspired to diminish the supply, and it is now reported as rapidly failing in many places. On the whole, how-ever, it is probable that with the present state of the market the drought will not be without beneficial effects, preventing an excessive accumulation of stock, and thus holding out brighter prospects for the future. At the same time the conditions may not always prove so favorable, and cases will unquestionably arise when the curtailment of production such as is now rendered neceseary will be attended with serious inconvenience. It is evident that in these days of high-pressure business enterprises there are very few important lines of manufacturing which can afford to depend upon waterpower, especially as its economy over steam. under the most favorable conditions, is so small as to warrant a doubt whether it is not largely imaginary.

Competition of Iron and Steel

The tendency to substitute steel for than to-day. This substitution has been in progress for years; indeed, it has been inevitable from the moment of the discovery of the Bessemer process, but its progress was delayed during the early years of the manu-be delayed for a year, or indefinitely. The facture of Bessemer steel while the process sum of \$150,000 additional will be required was being improved and its cost of manufac-During the late panic, however, and the low prices of iron and steel, the latter metal was rapidly displacing the former. With the advance of prices and great demand for all iron and steel products the rapidity of this substitution was somewhat checked, but with the low prices that are now ruling and the advan-tages that steel possesses as to quality and adaptability to many purposes, and the character of the labor employed, it is again fast encroaching on iron.

This substitution has been most marked,

of course, in the case of rails. A few years ago all rails were made of iron; to-day the production of iron rails is less than it was during the worst years of the panic—1877 and 1878—and at the present relative price of iron and steel rails it is evident that steel entirely supersede iron in railroad ng. Steel is also being used, both building. open-hearth and Bessemer, in many forms of product for which, until within a very few years, iron alone was considered suitable. It is not ten years since British engineers showed conclusively to their own satisfaction that steel never could be used in boiler plates, into which it now largely Grades of steel that were formerly produced by the crucible process are now made by Bessemer or open-hearth, and this has so cheapened these grades as to bring their price somewhat near the rate at which iron can be sold, and, in view of the superior quality of the steel, has led to its adoption in the place of iron. Steel has also largely sup-planted iron in the manufacture of wire, the place of iron. Steel has also largely sup-planted iron in the manufacture of wire, hundreds of thousands of tons being annually consumed in its manufacture. Some of the last uses to which steel which steel prise to their respective congregations, and

Bessemer plants are already under construction for Wheeling nail mills, the product to be used in the manufacture of nails.

One reason that has led to the adoption of steel in place of iron is, of course, the superior character of the quality of the prodsuperior character of the quality of the product. For many purposes where the greatest tensile strength is required, steel, by reason of its superiority in this respect, has been introduced, and as some of the difficulties in the way of its use, growing out of its low percentage of elongation, are overcome —and they have been to a great measure—this will be used to a still greater extent, especially for structural purposes. Indeed, it is rumored in the West that a Bessemer works already in existence there is to be changed so as to manufacture steel chiefly for structural purposes. But the chief reasons why steel is supplanting iron are the cheaper rate at which it can be produced, and the character of the labor required to produce it. As is well known, rails are selling to-day at \$35 a ton at the mill, while muck bar from puddled iron cannot be produced at much less than \$30. Muck bar is quoted at Philadelphia in your last report: "Sales at \$33 to \$33.50 your last report: "Sales at \$33 to \$33 at the mill"—\$1.50 to \$2 below the price finished steel rails, while at Pittsburgh the quotation is \$32 to \$32.50. Indeed, it has been asserted again and again that finished rails will be produced in this country some time as low as muck bar can be produced. I do not think that this can be done to-day. but I have no doubt that it will be done in the near future. Now, this being so, it is evident that under the present conditions steel must supplant iron in many of its forms. Up to the steel bloom or billet but very little skilled labor is necessary, and a great deal of the work can be done by machinery, instead of the excercise of human power, and, consequently, the labor cost of the product is not liable to the fluctuations or to the contingencies that are connected with the manufacture of puddled iron. I have no doubt, also, that the refusals of the pud-d'ers and other laborers in the West to accept lower rates have been the cause directly of the substitution of steel for iron in many

There is not the least question that the con stant labor difficulties, and especially the demand by the puddlers for 25 cents extra above Pittsburgh prices, are what has led to the determination of the Wheeling nail manufacturers to use steel instead of iron. Bessemer converter never goes on a strike The same thing is true also in regard to axle iron; the demand by some of the puddlers for \$1 extra for puddling iron to be used in the manufacture of axles has led to the substitution of steel for iron in this case also. It will no doubt be noted that the great extenon of the use of steel for iron is in the West where the prices for puddling, muck rolling and other similar work connected with the manufacture of puddled iron are very much above the prices ruling in the East, and we have no doubt that had better counsels prevailed in the West and lower prices been accepted, while it would have been impossi ble to have prevented the substitution of steel for iron, it would have very much de-layed it. Respectfully, A MANUFACTURER.

The Bartholdi Statue.

A meeting of the American Committee of of the Statue of Liberty has been called by the Executive Committee, for the purpose of organizing immediate and efficient methods for raising the required funds. From the report of the Executive Committee it appears that they have thus far secured by voluntary subscriptions the sum of \$94,036.54, of which there has been paid out on contracts and in various miscellaneous expenditures \$19,591.06. The balance on hand will serve to complete the concrete work of the to complete the concrete work of the pedestal to a hight of about 52 feet from its foundation, leaving only a small sum in the treasury. In order that the committee may proceed with their work at an early day in the spring, it is to the last degree important that the money required for the completion of To the Editor of The Iron Age. - DEAR the pedestal for the colossal Statue of Liberty immediately raised. As the statue iron in the arts was never more marked finished and nearly ready for delivery, the during the winter, if the work is to be prose-cuted early in the spring. Otherwise it must in the spring. to complete the pedestal in accordance with approved des

In order to secure compliance with their certainly very reasonable request, the Executive Committee have recommended to the General Committee the adoption of the following measures: "I. That each member of the General Committee be requested to solicit subscriptions from such of his personal acquaintances as he may think able and willing contribute. 2. That a committee from each of the cities of New York, Brooklyn and Jersey City be appointed to make a personal canvass for subscriptions among the reputed men of wealth in those cities. 3. That a nen of wealth in those cities. 3. That a committee of three be appointed to consult with the several business committees appointed last fall, and to reorganize them for immediate and effective service. 4. That a committee of three be appointed to confer with the managers of theaters and other places of amusement, and, with the authorities of military and other organizations, to arrange a series of benefits, balls, receptions, &c., in behalf of the pedestal fund. 5. That a committee of three be appointed to and execute various methods of small popular subscriptions through the Grand Army of the Republic, through trade and labor associations, and through local committees and individual exertions, whereby the mites of

would remark that, at present prices in Europe, it does not pay to ship Lake copper, and of nails. As is well known, three pointed by the Chair to sit for two hours each day to carry out the provisions of this report, and to do such other necessary work as may seem to them advisable after consultation with the Executive Committee."

The report is signed by Mr. Joseph W. Drexel, the chairman of the Executive Committee, of which Messrs. Parke Godwin, J. W. Pinchot, V. Mumford Moore and Frederick A. Potts are the remaining members. The strange apathy which has thrown its pall over this enterprise is positively inexplicable. In the face of the—certainly justly—vaunted "American liberality," in the face of the fact that the gentlemen com prising the "American Committee" are not only deserving of, but, in fact, possess, the fullest confidence of every community in the United States, and notwithstanding our onstant popular expressions of friendship and regard for France, our ancient ally and sister Republic, there is imminent danger of a shameful fiasco in the acceptance of thi noble gift, for the want of the paltry sum which the committee mention as necessary for the completion of the pedestal. inclined to believe that this danger could be easily averted by more direct appeals than have hitherto been made, and trust that the working organization now proposed by the Executive Committee will meet with that measure of success which their zeal deserve and which our national pride demands.

The New Railroad Time.

Some idea of the changes of running time of the different railroads, about to be made by the adoption on the 18th of the four standards of time, may be formed by the partial list given below, the letter "f" denoting that the clock is to be set ahead, and the letter "s" that it is to be set back:

Atchison, Topeka and Santa Fé, east of Dodge City, clocks only, 9 minutes, f.

Atchison, Topeka and Santa Fé, west of Dodge City, clocks and schedules, 51 min-

Baltimore and Ohio (west), both clocks and chedules, 28 minutes, s.
Boston, Hoosac Tunnel and Western, both locks and schedules, 4 minutes, s.

Boston and Albany, clocks only, 16 min Canadian Pacific (Eastern division), clocks

only, 6 minutes, s. Central Vermont, both clocks and schedtles, 12 minutes, s. Chesapeake and Ohio, both clocks and

chedules, 8 minutes, f.
Chicago and Alton, clocks only, 9 min-

Chicago and Grand Trunk, both clocks and schedules, 9 minutes, s.
Cleveland, Columbus, Cincinnati and Indianapolis, both clocks and schedules, 28 min-Delaware and Hudson Canal Company,

locks only, 4 minutes, s.

Delaware, Lackawanna and Western, both

clocks and schedules, 4 minutes, s.

Fort Wayne, Cincinnati and Louisville, both clocks and schedules, 23 minutes, s. Freehold and New York, both clocks and chedules, 4 minutes, s.

Hartford and Connecticut Western, clocks only, 4 minutes, s.

Lake Shore and Michigan Southern, both locks and schedules, 28 minutes, s.

Lehigh Valley, clocks only, I minute, f. Louisville and Nashville, clocks only, 18 ninutes, s. Missouri Pacific, clocks, schedules at St.

Louis only, 8 minutes, s. New York, Lake Erie and Western, clocks only, 4 minutes, s.

New York Central and Hudson River,

clocks only, 4 minutes, s.

New York City and Northern, clocks only, minutes, s. New York and New England (east of Con-

necticut), both clocks and schedules, 14 min-New York and New England (in Connecticut), both clocks and schedules, 4 min Pennsylvania (New York division), both

Pennsylvania (New York division), both clocks and schedules, I minute, f.
Pennsylvania (all divisions except New York), clocks only, I minute, f.
Philadelphia and Reading, both clocks and chedules, I minute, f.
Rome, Watertown and Ogdensburg, clocks

only, 4 minutes, s.

The four standards of time will be known as the "Eastern Standard Time," Standard Time," "Mountain

Time" and "Pacific Standard Time.

A novel steering apparatus is to be placed in the United States tug Nina. The apparatus is the invention of J. J. Kunstadter, a Hungarian, and it has been used with success in Europe. The shaft of the propeller is carried through the rudder-post, and there by means of a universal joint is connected with a shaft running through the rudder and having at its end a supplementary screw. The universal joint allows the rudder to move freely, and yet establishes a perfect connection between the main and the supplementary screws. It will be readily seen that when the helm is put to port or to starboard the driving power of the supplementary screw is brought into play to turn the The vessel is thus turned quickly in a small space. In cases where there is danger of collision and the engines are reversed, the vessel can be driven backward and completely out of her course in an exceedingly short space of time, as experiments have shown.

A new electric light intended for illumi nating railway carriages has been patented in England by Mr. Cheesewright, and in-troduced by Mr. Gammon, of the London and South-Western Railway Company. The light is generated from a primary which does away with the use of steam en-gines and dynamo machines. The batteries, which can be fixed under seats of carriages, triotic enterprise," And they passed the can be charged for 20 hours. The dining-room car of the Leeds express train and South-"I. That the reverend clergy of the sev-

The following tables, from a report by Consul-General Sutton, of Matamoras, to the State Department at Washington, show the articles proposed to be admitted free of duty into either country

SCHEDULE OF MEXICAN ARTICLES TO BE ADMITTED FREE OF DUTY INTO THE UNITED

		Articles.	Duty.	Imports.	Duties paid.
(1)	1	Animals, alive, specially imported			
(-)		for breeding purposes. Barley, not pearl, bushel Beef, pound Coffee.	Fron	NT-4 -4-4-1	
(9)	2	Paylow not post to be	FECCI	Not stated	
		pariey, not pearl, bushel	10 cents	¥6,265,	\$538.50
(8)	3	Beer, pound	1 cent	Not stated	g.men.co
(6)	4	Coffee	Free	\$1.817.584	
(17)	5	Eggs Esparto and other grasses and pulp	Free	9905	
(18)	6	Esparto and other grasses and pulp		Contract to the second	
()		-0 C 41	977	37-4-4-4-3	
(14)	7	Flowers natural of all blads	Elec.	Not stated	
(15)	8	Flowers, natural, of all kinds Fruits, all kinds of fresh fruits Oranges:	Free	Not stated	
(19)	0	Fruits, an kinds of fresh fruits		Est. \$20,000	Fet \$1,000
		Oranges:			ESSEC. Graftings
		Box, 216 cubic feet	25 cents		
		Half box	18 cents		
		Rarrel	85 conta		
		Barrel. Per 1000.	@1 co		
			\$1.00		
		Lemons:			
		Box, 21/6 cubic feet	80 cents		
		Half box	16 cents		
		Per 1000,	\$2		************
		Oranges and lemons n o s	00 man anna	************	************
		Limos	20 per celle	*************	***********
		Limes. All other. Goat skins, raw. Henequen, Sisal, hemp, and all other	er per cent		
(00)	0	All Other	Free		
(26)	19	Goat skins, raw	Free	Est. \$400,000	
(16)	10	Henequen, Sisal, hemp, and all other			
		Henequen, Sisal, hemp, and all other like substitutes for hemp, per ton. Hide ropes. Hides, raw or uncured, whether dry.	825	90 067 676	B 40 000 000
(10)	11	Hide ropes	Free	Notetated	\$48,907.50
11, 27)	12	Hides, raw or uncured, whether dry.		Not Stated	
		salted or pickled, and skins, except			
		shoon elein mith the skins, except			
		sheep-skin, with the wool on, An-			
		gora goat-skins, raw, without the			
		wool, and asses'skin	Free	Est \$1,000,000	
(18)	13	India-rubber, crude and milk of Indigo	Fron	@161 04°	
8,19)	14	Ym dl m.	WW.	Spinisher College of the contract of the college of	
(20)	18	Istle on Termolog filter ton	Proc	24,100,	
(21)	10	Jalap	D10	Est. \$250,000	For \$20 500
	10	Jaiap	Free	Not stated	1301. 606, 900
(12)				Not stated	
(94) 1	18	Logwood, berries, nuts, archil and			***********
		vegetables for dvoing or used for			
(48)		commonly deed to	¥3		
(48)					
()	9	composing dyes	Free	Not stated	
(23) 1	9	Molasses:	Free	Not stated	
()		Not above 56°	4 cents per gallon !	@1 271	
(23) 1		Not above 56°	4 cents per gallon !	@1 271	
()	10	Not above 56°	4 cents per gallon)	\$1,771	About \$168.80
(23) 1	10	Not above 56°	4 cents per gallon)	\$1,771	About \$168.80
(23) 1 (1) 5 (4) 5	00 21	Not above 56°. Above 56°. Palm or cocoanut oil.	4 cents per gallon 8 cents per gallon 10 per cent	\$1,771s2	About \$168,80
(23) 1 (1) 5 (4) 5 (30) 8	00 21	Not above 56°. Above 56°. Palm or cocoanut oil.	4 cents per gallon 8 cents per gallon 10 per cent	\$1,771s2	About \$168,80
(23) 1 (1) 5 (4) 5 (80) 8 (7) 8	00 21	Not above 56°. Above 56°. Palm or cocoanut oil.	4 cents per gallon 8 cents per gallon 10 per cent	\$1,771s2	About \$168,80
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8	00 21	Not above 56°. Above 56°. Palm or cocoanut oil.	4 cents per gallon 8 cents per gallon 10 per cent	\$1,771s2	About \$168,80
(23) 1 (1) 5 (4) 5 (80) 8 (7) 8	00 21	Not above 56°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch	4 cents per gallon; 8 cents per gallon; Free. 10 per cent. Free. Free.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated	About \$168.80
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8	00 21	Not above 56°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch	4 cents per gallon; 8 cents per gallon; Free. 10 per cent. Free. Free.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated	About \$168.80
(23) 1 (1) 5 (4) 5 (80) 8 (7) 8 (25) 8 (5) 8	00 21 23 24 35	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Sarsaparilla, crude. Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound.	4 cents per gallon; 8 cents per gallon; Free. 10 per cent. Free. Free.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated	About \$168,80
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8	00 21 23 24 35	Not above 55° Above 56° Palm or cocoanut oil Quicksilver Sarsaparilla, crude Shrimps, and all other shell-fish Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound. Tobacco, leaf, unmanufactured, per	4 cents per gallon 8 cents per gallon Free 10 per cent. Free Free Free Free 12/5 cents to 25/4 cents	\$1,771 \$2. Not stated \$8,628 Not stated Not stated \$102,147	About \$168.80 Est. \$75,000
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8 (28) 8	00 21 23 24 25 26	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound. Tobacco, leaf, unmanufactured, per pound.	4 cents per gallon 8 cents per gallon Free 10 per cent. Free Free Free Free 12/5 cents to 25/4 cents	\$1,771 \$2. Not stated \$8,628 Not stated Not stated \$102,147	About \$168.80 Est. \$75,000
(23) 1 (1) 5 (4) 5 (80) 8 (7) 8 (25) 8 (5) 8	00 21 23 24 25 26	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds:	4 cents per gallon) 8 cents per gallon; Free. 10 per cent. Free Free Free. 12/2 cents to 28/4 cents. 35 cents, 75 cents and \$1	\$1,771 \$2. Not stated \$8,628 Not stated. Not stated. \$102,147 \$31,150.	About \$168.80 Est. \$75,000 Est. \$18,487
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8 (28) 8	00 21 23 24 25 26	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds:	4 cents per gallon) 8 cents per gallon; Free. 10 per cent. Free Free Free. 12/2 cents to 28/4 cents. 35 cents, 75 cents and \$1	\$1,771 \$2. Not stated \$8,628 Not stated. Not stated. \$102,147 \$31,150.	About \$168.80 Est. \$75,000 Est. \$18,487
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8 (28) 8	00 21 23 24 25 26	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds:	4 cents per gallon) 8 cents per gallon; Free. 10 per cent. Free Free Free. 12/2 cents to 28/4 cents. 35 cents, 75 cents and \$1	\$1,771 \$2. Not stated \$8,628 Not stated. Not stated. \$102,147 \$31,150.	About \$168.80 Est. \$75,000 Est. \$18,487
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8 (5) 8 (28) 8 (29) 2	90 21 22 23 24 25 66	Not above 56°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch. standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds: Potatoes, per bushel. Other vegetables, fresh.	4 cents per gallon 8 cents per gallon Free 10 per cent. Free Free Free Free 12/5 cents to 2% cents. 35 cents, 75 cents and \$1 15 cents 10 per cent.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated \$102,147 \$31,150 Est. \$2000.	About \$168.80 Est. \$75,000 Est. \$18,487 \$170,70
(23) 1 (1) 5 (4) 5 (30) 8 (7) 8 (25) 8 (28) 8	90 21 22 23 24 25 66	Not above 56°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch. standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds: Potatoes, per bushel. Other vegetables, fresh.	4 cents per gallon 8 cents per gallon Free 10 per cent. Free Free Free Free 12/5 cents to 2% cents. 35 cents, 75 cents and \$1 15 cents 10 per cent.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated \$102,147 \$31,150 Est. \$2000.	About \$168.80 Est. \$75,000 Est. \$18,487 \$170,70
(23) 1 (4) 5 (4) 5 (30) 8 (7) 8 (5) 8 (5) 8 (28) 8 (29) 8	90 21 22 23 24 25 66	Not above 56°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch. standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds: Potatoes, per bushel. Other vegetables, fresh. Wood and timber of all kinds: Unmanufactured.	4 cents per gallon 8 cents per gallon Free 10 per cent. Free Free Free Free 12/5 cents to 2% cents. 35 cents, 75 cents and \$1 15 cents 10 per cent.	\$1,771 \$2. Not stated \$8,628 Not stated Not stated \$102,147 \$31,150 Est. \$2000.	About \$168.80 Est. \$75,000 Est. \$18,487 \$170,70
(23) 1 (4) 5 (4) 5 (30) 8 (7) 8 (5) 8 (5) 8 (28) 8 (29) 8	90 21 22 23 24 25 66	Not above 55°. Above 56°. Palm or cocoanut oil. Quicksilver. Sarsaparilla, crude. Shrimps, and all other shell-fish. Straw, unmanufactured. Sugar, not above No. 16, Dutch. standard in color, per pound. Tobacco, leaf, unmanufactured, per pound. Vegetables, fresh, of all kinds: Potatoes, per bushel. Other vegetables, fresh.	4 cents per gallon 8 cents per gallon Free Free Free Free 13/6 cents to 23/4 cents and \$1 15 cents 10 per cent. Free Free	\$1,771 \$2. Not stated \$5,624 Not stated Not stated \$102,147 \$31,150 Est. \$2000. Free \$499,776	About \$108.80 Est. \$75,000 Est. \$18,487 \$170.70

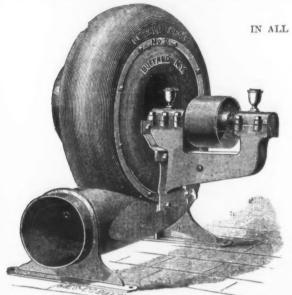
[Note.—The American tariff was changed July 1, 1883. The "duty" given is the new one. The "dutien paid" are computed and are what would have been paid had the new tariff been in force during the period named. All dates are for the year ending June 30, 1882, unless otherwise specially stated. The amount and value of imports are taken from the Annual Report of the Bureau of Statistics of the United States, except when otherwise stated.]

Nos.	Articles.	Duty.	Imports.	Duties paid.
			U. S. coin.	Mexican coin.
(1) 1 (74) 2	Accordeons and harmonicas	Aprils free and 50 cents	Not stated	
(8) 3	Asbestos, for roofs	. 55 per cent. and 75 cts	Not stated	************
(12) 4 (22) 5	Accordeons and harmonicas. Anvils. Asbestos, for roofs. Bars of steel for mines, round, &c. Barrows and hand trucks. Bricks, all kinds. Books, unbound or bound. Beams and rafters of iron for roofs coal of all kinds. Cars and carts with springs. Coaches and cars for railways. Crucibles and melting pots. Cane knives. Clocks, mantel or wall.	Free and 50 cents	Est. \$8000	Est. §36
(36) 6 (38) 7	Bricks, all kinds	Free and #1	8692	*****************
(73) 8	Beams and rafters of iron for roofs	Free and 50 cents	Not stated	Est. \$1500
(19) 9	Coal of all kinds	Free	\$76,022	*************
(21) 10 (23) 11	Coaches and cars for railways	Carts, 2 wheels, ea. \$3	Not stated	************
(24) 12	Crucibles and melting pots	Free and 50 cents	Not stated	***************************************
(25) 18	Cane knives	Free and 50 cents	Not stated	
(68) 14	Clocks, mantel or wall			
(26) 15	Carriages, each	\$66, \$88, \$182, \$176,	\$100 DIE	Pot Birt ov
(00)	Suggested definition in place o			E.M. 0110,000
	Wagons and carts, each	. \$60 or \$38		
	all kinds	\$66 or \$33 and 50 cents		
(27) 16 (14) 17 (40) 18	Dynamite	Free and 50 cents	Not stated	**************
(40) 18	Faucets, per kg	19 cents and 50 cents	Not stated	Est. \$1300
(47) 19	Fuse and wick for mines	Free and 50 cents	Not stated	*** ***********************************
(58) 90	Feed, dry and straw	Free and 50 cents	Not stated	
(29) 21 (37) 22 (54) 23	Fruits, fresh	55 per cent and 50 cents	Not stated	Est. \$2500
(54) 23	Fish, fresh	. 55 per cent. and 75 cts.	Not stated	
(80) 24	Guano	Free and 50 cents	None	
(6) 25 (16) 26	Diligences, carriages and wagons all kinds. Dynamite. Fire-pumps, engines and pumps. Faucets, per kg. Fuse and wick for mines. Feed, dry and straw. Fruits, fresh. Firewood. Fish, fresh. Guano. Hoes, mattocks and their handles. Houses of wood or iron, complete. Hoes, common agricultural kulver.	Free and 50 cents	Not stated	
(17) 27				
	harrows, rakes, shovels, pick-axes	Free and 50	Not state 2	
(66) 28	Henequen hags, of Mexican products	155 per cent, and 75 cta	Not stated	
(81) 29	Ice	Free and 50 cents	None	***********
(32) 30	Iron and steel rails	Free	\$66,260	***********
(84) 81	Inks, printing	Free and 50 cents	Not stated	*************
(68) 83 (72) 38 (15) 84	Iron beams, per kg	6 cents and 50 cents	Not stated	
(15) 34 (39) 35	Lime, hydraulic	Free and 50 cents	\$9,758	Est. \$2,000
(56) 86	Lithographic stones	Free and 50 cents.	Not stated	***********
46) 37	Masts and anchors	Free	Est. \$40,000	*************
(41) 88	Marble in blocks	55 per cent, and 75 cts.	8812	Est. \$200
(42) 89 (54) 40	harrows, rakes, shovels, pick-axes spades and mattocks. Henequen bags, of Mexican products ice. Iron and steel rails. Instruments, scientific. Inks, printing. Iron beams, per kg. Lime, hydraulic. Locomotives. Lithographic stones. Marble in blocks. Marble in flags for pavements. Machines and apparatus of all kinds for industrial, agricultural and mining purposes, science and art, and any senarate extra parts and			
(48) 41	and any separate extra parts and pieces pertaining thereto	Free and 50 cents	Est. \$150,000	Est. \$12,500
(50) 42	Money, legal, of silver or gold	Free	Not stated	
49) 48	Molds and patterns for the arts	Free and 50 cents	Not stated	** **********
51) 44 (9) 45	Oats, in grain or straw.	Free and 50 cents	\$10.499	Est. \$6,500
64) 46	Oars for small vessels	Free and 50 cents	Not stated	Est. Civita
(5) 47 52) 48	Paper tarred for roofs	55 per cent and 75 ata	See No. 40	*************
57) 49	Plants and seeds for cultivation	Free and 50 cent	81.509	Fat. 928
69) 50	Pens, of metal, not gold	G. Kilo, 86e. and 75e	Not stated	
50) 51	retroieum, crude	(No leakage: net.	ea,705,	Est. \$3,935
(60) 52	and any separate extra parts and pieces pertaining thereto. Metal, precious. Metal, precious. Modal, precious. Modal and patterns for the arts. Naphtha. Oars for small vessels. Plows and plowshares. Paper tarred for roofs. Plants and seeds for cultivation. Pens, of metal, not gold. Petroleum, crude. Petroleum and coal oil. Powder, common. Quicksilver. Rags, paper. Roof thes. Sulphur. Stoves of iron.	weight per kg. 9 - 1	§226,115	\$472,045
(62) 58	Powder, common	Free and 50 cents	Est. \$100,000	Est. \$1,136
10) 54 70) 55	Rags, paper	Free and 50 cents	None	
67) 56	Roof tiles	Per M, \$165 and 50 cts.	Not stated	
(11) 57	Sulphur	Free and 50 cents	Not stated	
18) 58	Stoves of Iron	or K. 19 and 50 cents, cents.	89559,	Est. \$9000
28) 89	Staves and headings for barrels	Free and 50 cents	84508	Est. \$225
38) 60	Soda, hyposulphite of	Free and 50 cents	Not stated	
43) 61	Sewing machines	Free and St	8305 505	Est. \$2500
44) 62 61) 68 65) 64	Slates for roofs	Free	Not stated	East. \$10,000
65) 64 90) 65	Sausages, net kg	24 cents and 50 cents	Not stated	
85) 66	Staves of Iron. Staves and headings for barrels. Soda, hyposulphite of . Steam engines. Sewing machines. Slates for roofs. Sausages, net kg. Teasels of wire. Tools and instruments of steel, iron, brass or wood, or composed of .	r ree and so cents	Not stated	
	these materials for artisans, per kg	G. wt., 19 cts. and 50 cts 1	Est. \$200,000	Est. \$25,000
1	of all kinds	Free and 50 cents		Est. \$1500
	Other vegetables, fresh	Free and 50 cents	889,1%	Est. \$4000
(2) 69 (8) 70	Wire, telegraph. Wire, of iron or steel, from No. 25 upward. Wire barbed for fences and the hooks	Free and 50 cents	Sat. \$5000	
	Wire harhed for fances and the books	Free and ou cents!	Not stated	
(4) 71	and nails to fasten the same, per kg	G. wt., 2 cts, and 50 cts 3	Not stated	
(4) 71 1 18) 72 1	and nails to fasten the same, per kg Water-pipes of all materials. Window blinds, per kg	G. wt., 2 cts. and 50 cts ? Free and 50 cents	Not stated	

Totes.—All dates are for year ending June 30, 1882, unless otherwise specially stated. The amounts and value of imports are taken from the Annual Report of United States Bureau of Statistics, unless otherwise stated. All metric denominations have the American equivalent in parenthesis or below The Mexican tariff is of three sorts: First, the principal or regular duty, and which is the one usually given; second, an additional duty of 2 per cent. on the previous duty; third, a weight duty from 5 cents to 81 on each kg. (280 pounds), gross. Where this weight duty is fin importance I have calculated the duties and marked them "Est." The executive has lately been authorized to increase all duties 5 per cent. Articles marked "Free" are in the so-called free list, and have only the weight duty. This weight duty is from 50 cents to \$1 on each 100 kg, gross (220 pounds); 50 cents, 75 cents, 80 cents or \$1 means a weight duty of 50 cents, &c., on each 100 kg, (220 pounds), gross.]

NEW AND IMPROVED

Buffalo Exhausters,



IN ALL THEIR VARIETY,

For Planing

Mills,

Ventilating

Purposes, &c.

Superior to any

other make.

BUFFALO FORGE COMPAN

BUFFALO, N. Y.

AMERICAN FACING CO.

WHITEHEAD BROTHERS' FOUNDRY FACINGS

And Supplies of all Kinds.

BITUMINOUS OR SEA COAL, LEHIGH, CHARCOAL, SOAPSTONE, INDIA SILVER AND GERMAN LEADS, &c.

XX MINERAL FOR HEAVY WORK.

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Our fine Facing known, as WHITEHEAD'S STOVE PLATE FACING, is the best in use. Send us a sample order.

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MOLDING SAND,

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We give special attention to the selection of Albany and Crescent Sands for Stove

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Durable, and give entire satisfaction. All sizes for

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COVERINGS.

The Best Boiler and Pipe Covering Made!



STEAM

BOILERS and PIPES, Refrigerators, I lee Houses and Hot and old Water Pip

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BOLT & RIVET CLIPPERS.

For cutting off the ends of Bolts and Rivets, arriages, wagons, harness, etc. Ask for there you buy your hardware, or send for ar and price list.

CHAMBERS, BROTHER & CO., 52d St., below Lancaster Ave., Philadelphia, Pa

THE LIVINGSTON HORSE NAIL COMPANY,

104 Reade St., NEW YORK,

MANUFACTURERS OF THE

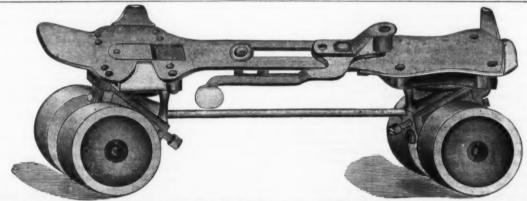
EMPIRE BRONZED"

Hot Hammered and Pointed

HORSE NA

WILL NOT SPLIT,

And will Hold a Shoe Better than any Nail Made.



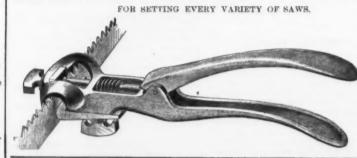
We now offer our New Patent Self-Adjusting Lever Rink Roller Skate, with foot plate and working mechanism made of crucible steel, blued or nickeled Malleable Iron Trucks, Adjustable Rubber Springs, Steel Axles and Boxwood Wheelt. This is the best Guideable Rink Skate ever offered to the public. We also manufacture the Standard Scientific and New Rink Roller Skates, with wood tops, also New York Roller Skates. Our Illustrated Catalogue for 1883, showing the most complete line of Roller and Ice Skates ever offered to the truck by any manufacturer, will be mailed on application. to the trade by any manufacturer, will be mailed on application.

UNION HARDWARE COMPANY.

75 Chambers Street, NEW YORK.

Manufactory, TORRINGTON, CONN.

MORRILL'S PERFECT SAW SETS AND BENCH STOP.



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64 College Place,



FERSON PIG Forge and Foundry, JEFFERSON IRON WORKS.

Office and Works, H. WALLACE, President.

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STEUBENVILLE, OHIO.

THE ORIGINAL AND ONLY GENUINE CHAMPION

We Caution the Trade against buying imitations of this Saw stamped or etched the "CHAMPION," as all such are infringements of our Trade-Mark.

WHEELER, MADDEN & CLEMSON MFG. CO., Middletown, N. Y.

DEPARTMENT OF PUBLIC WORKS,

NEW YORK CITY.

Keystone Portable National Meter Co.,

JOHN C. KELLEY, President,

No. 51 Chambers St.,

NEW YORK



OTIS A SMITH, Manufacturer, Rockfall, Ct.



GALLOWAY BOILE

Safety Economy in Fuel, Low Cost of Maintenance Dry Steam without Superheating, Large Reserve Power ARE THE ADVANTAGES OFFERED BY THIS BOILER IN A PRE-EMINENT DEGREE.

3000 Horse-Power in Progress and for Immediate Delivery. Correspondence Solicited.

EDGE MOOR IRON COMPANY

SOLE LICENSEE AND MANUFACTURER FOR THE UNITED STATES. POST OFFICE, WILMINGTON, DELAWARE.

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CARMEL OX SHOES

STEEL TOE CALKS,

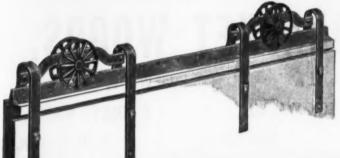
FINISHED COMPLETE. READY FOR NAILING ON. The Best and Cheapest Shoe Made.

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MOUNT CARMEL, CONN.



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IT REQUIRES NO OIL

IS IMPOSSIBLE TO DERAIL.



Made of Wrought Iron (except the Wheel, which has a Steel Axle) in a thorough manner, of sufficient strength to sustain the heaviest door.

The heaviest door can be moved by a child, and will always operate as well as when first applied. The Rail is made of Wrought Iron, in two-feet sections.

Trade Supplied by

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NEWBURYPORT. MASS.



FRONT VIEW. .

Philadelphia,

Cast Iron Pipe

Lamp Posts, Valves, &c., Mathew's Pat. Anti-Freezing Hydrants. 400 CHESTNUT STREET.

WITHEROW & GORDON. **Engineers & Contractors** PITTSBURGH, PA. Agents for the

WHITWELL HOT BLAST STOVES

OVER 600 IN USE.

The following parties either have them in use The following parties entire in a deer construction Codar Point Iron Co., Ps. Crane Iron Co., Ps. Crane Iron Co., Ps. Crane Iron Co., Ps. R. H. Coleman, Lebanon. Ps. Chester Rolling Mill Co., Ps. Davenport, Fairbaira & Co., Ps. Isabella Furiasce Co., Ps. Ps. Con Furiasce, Ps. Spearman Iron Co. Ps. Spearman Iron Co. Ps. Ena Iron Works, Ohio.
Millon Coal and Iron Co., Ohio.
Millon Coal and Iron Co., Ohio.
Millon Coal and Iron Co., Ohio.

Milton Coal and Iron Co., Ohio Winons Furnase Co., Ohio Mose & Marshall, Ohio. H. Campbell & F. na Ohio Hockins Valley Iron Co., Ohio, Cleveland Bolling Mill Co., Ohio, Cleveland Bolling Mill Co., Ohio, Cleveland Bolling Mill Co., Ohio, Meier Iron Co., Ill. North Chicago Steel Co., Ill. Union Iron and Steel Co., Ill. Reans & Culbertson, Ky. orton Iron Co., Ky. orton Iron Co., Ky. orton Iron Co., Co., Tenn. wance Furnase Co., Tenn. mes C. Warner, Kleing Fawn, Ga., to Iron Co., Zenner, Co., Tenn.



THE BEST GLUE IN THE WORLD FOR Pattern Making, EMERY BELTS, WHEELS, &c., &c.

end for Pamphlet.

IN BOTTLES AND IN CANS READY FOR USE STRONGER MORE CONVENIENT AND MORE ECONOMICAL THAN ANY OTHER GLUE SOLLO EVERYWHERE ON ITS MERTS M'FD BY RUSSIA CEMENT CO. GLOUCESTER, MASS

AWARDED THE GOLD MEDAL AT THE INTERNATIONAL

EXHIBITION. London, 1883. INDUSTRIAL ITEMS. MASSACHUSETTS.

The manufacture of files is soon to be commenced at Chiltonville by S. Hamblin, who invented a file machine and organized a stock company, to which he sold his patent, in Pittsburgh. Since then he has been devising a machine that would make a file in every way similar and as good as a hand-made file, and he believes that he now has

achieved that desirable result. He has at his shop in Chiltonville one of these machines running by hand-power to demonstrate the fact.

It is expected that the new watch factory at Williamstown will be in operation by January 1. Over 100 operatives will be employed, many of them coming from abroad. CONNECTICUT.

The Wilson Sewing Machine Company, of Wallingford, have 2000 machines nearly finished, and expect to turn them out at the rate of 50 per day during the coming month.

NEW YORK

Chrome Steel Works, Brooklyn, E. D., are making a combination chrome steel suitable for safes, jails and deposit vaults. The de-mand for this specialty of steel has been so great that they have recently put in a new 200-horse-power engine. They employ 150 men, and their sales for this year so far are largely in excess of last year

PENNSYLVANIA.

The shops of the Philadelphia and Reading Railroad Company, in Reading, are very busy, every track in the machine shop being filled with engines undergoing repairs. There is no probability of a suspension in that de partment during the winter.

Messrs. Reis Brothers, of Newcastle, have sold their interest in Neshannock Furnace to A. L. Crawford for \$95.000. Mr. Crawford which is now under way, is completed. The rebuilding of the furnace is rapidly nearing

Lucy Furnace, at Orbisonia, Huntingdon County, will blow out soon on account of unremunerative prices of iron. The owner is John Whitehead, the coal operator of

A serious accident occurred on the morn ing of the 7th inst. at the Philadelphia and Reading Coal and Iron Company's Knickerbocker Colliery, near Shenandonh, which resulted in the instant death of one man and the injury of a number of others. William Wagner, who was assistant master mechanic of the coal and iron shops at Pottsville, on that morning, with several of his men, made a trial of some new machinery. About 11 o'clock the engine was running, and every-thing apparently in good order, when sud-denly a terrific report was heard. An exam-ination of the engine-house was subsequently made, when it was ascertained that the huge fly-wheel of the engine had burst, almost completely demolishing the new buildings.

PITTSBURGH AND VICINITY.

Wilson, Snyder & Co., of this city, have rought suit against the Manchester Iron and Steel Company for non-fulfillment of con-The plaintiffs claim that the company, its directors and its stockholders, are

Last Thursday the Pittsburgh Steel Casting Company made a successful experiment in rolling shaped blooms for deck and I-beams from square ingots weighing 2600 pounds each, thus reducing the section from 125 square inches in the ingot to 54 square inches in the shaped bloom. They were just 60 minutes in accomplishing this, in which time the cast iron was finished into a steel bloom. They claim that with additional machinery t could have been shaped into a finished beam in less than 15 minutes. This is the first successful experiment of the kind ever heard of, and will be of great importance as an experiment in the structural steel trade of the United States.—Commercial Gazette.

The Fuel Gas Company, of which Dr. Hostetter is the head, are pushing the work of laying pipes on Second avenue, and if not interrupted by bad weather will soon have it completed. The company have received a number of applications from glass, teal and iron manufacturers of the South steel and iron manufacturers of the South-side to lay pipe to their mills, and it is alto-gether probable that a large pipe will be laid across the Monongahela River, somewhere near the railroad bridge.

OHIO.

The Maumee Rolling Mills, at Toledo, are being rapidly got into shape, and will begin operations before long. The main building, 362 feet in length by 100 feet in width, is completed. Either side of this structure, extending the full length, are sheds 50 feet wide, which afford a space under cover 362 x 200 feet. The main machine shop, 32 x 65 feet, and the molding room, 50 x 64 feet, are fully completed.

The Youngstown Electric Light Company have had a charter granted to them, and as soon as possible will perfect the organization of the company. The corporators are A. W. Jones, Lloyd Booth, Frank Wood, D. B. Stambaugh and George Margerum, the capital being placed at \$60,000 which has capital being placed at \$60,000, which has been guaranteed as soon of the stock books are opened. They propose to manufacture and sell the Thompson-Houston electric light.

The Union Rolling Mill Company, Cleveland, have just built three new puddli furnaces as an addition to the Ætna Mill.

The forge at the Kelly Iron and Nail Works, Ironton, started up full last week, and 14 furnaces are now running double turn. The nail factory will be in full operation next week.

A large casting house has been built by the Ohio Iron and Steel Company, at Mary Furnace, Lowellville.

It is reported that the owner of the Hall Rolling Mill, in Hubbard, has decided to sell it and devote his entire attention to the coal trade.—Youngstown News-Register.

The Lane & Woodworth Glass Roofing Works have shut down on account of being unable to secure a sufficient number of employees.

ILLINOIS.

A disastrous fire at LaSalle destroyed two of the furnace houses of the Destieger Glass Works on the morning of the 5th inst. The total loss is estimated at \$50,000, against which there is insurance of but \$7500. One hundred and fifty men are thrown out of employment by the fire. It is hoped that the mammoth Siemens tank is but slightly injured, but its condition has not yet been ascertained, owing to its great heat. It is 18 x 4 feet in size and filled with 200 tons of molten glass.

The Chicago Die and Machine Works have just shipped a large and improved car-wheel grinding machine, weighing 7 tons, to the Northern Pacific Railroad. Preparations will be made at once for extending and improving the plant of this company.

Chamberlain, Coxe & Miller, of Chicago, in addition to the number of manufacturers and general hardware firms which they already represent, have recently been appointed agents for the Findlay Stave and Handle Company, of Findlay, Ohio.

For the past six weeks the Northwestern Horse Nail Company's works have been running 12½ hours per day, 70 machines being in operation. During October 190 tons of finished nails were made by the company. Ten additional machines are being built for these works.

The pattern shop of the Illinois Iron and Bolt Company's works, at Carpentersville, which was destroyed by fire on the 19th of August last, has been rebuilt. This company have also added to their foundry a new cupola having a daily capacity of 50 tons. The works are quite busy, and numerous orders for export are being filled.

The stockholders of the Union Iron and Steel Company were to have held a meeting at their office on the 13th inst., for the purpose of making a transfer of the concern to the new syndicate.

The W. F. & J. Barnes Manufacturing Company, of Rockford, are adding a large foundry to their works. This additional structure will be 50 x 150 feet. They report business as very brisk, and are making a large shipment of their goods to Australia.

MISSOURI.

The new light rail mill and the two new The new light rail mill and the two new Siemens gas-consuming furnaces of the St. Louis Bolt and Iron Company, at East St. Louis, will be started up next week. The new rail-mill department is distant some 300 feet from the old works and represents an investment of about \$50,000. The rolls used at the works are interchangeable.

The Deane Steam Pump Company—St. Louis office—have lately put in two 14 x 7 x 16 inch pumping engines at the Springfield Water Works, a 7 x 4½ x 8 inch pumping engine at the establishment of the Keckuk (Iowa) Plow Works, and a 14 x 8 x 12 inch double-plunger pump for parties at Weeb double-plunger pump for parties at Webb City. Their condensing apparatus has re-cently been put in the works of the Desloge Lead Company, at Bonne Terre, in the factory of the Quincy (Ill.) Paper Company, and in the establishment of E. W. Sparks, Alton,

water-works contracts on hand, and are quite busy both here and at their factory. At that establishment they now have under way some very large pumping engines, one for the Lynn (Mass.) Water Works, with a daily capacity of 6,000,000 gallons, and another for the Syracuse (N.Y.) Water Works, capable of throwing 3,000,000 gallons a day.—St. Louis Age of Steel.

INDIANA.

The works of the "C" Spring Cart Company, of Rushville, were destroyed by fire on Wednesday night, 31st ult. It proved a total loss, with the exception of some 20 carts. An invoice of stock, taken last July, carts. An invoice of sices, taken has only, showed \$14,000, besides buildings. The total insurance on stock and buildings was \$10,000. The loss above the insurance will be between \$7000 and \$8000. The company, between \$7000 and \$8000. The company, who will rebuild immediately, expect to be operating in about to days on an enlarged scale, after which all orders will be promptly filled.

Failure of the Danville Steel Company.—Reports received in this city last Thursday stated that the Danville Steel Company, of Danville, Pa., had become embarrassed, and 15 judgments for \$93,074 had been entered against it, upon which execution was issued to the sheriff. The company had been in operation since execution was i-sued to the sheriff. The company had been in operation since 1870, and had a paid-in capital of \$103,500. The property cost over \$250,000, and \$80,000, it is said, was expended in altering the plant to manufacture steel by the Siemens-Martin process. Peter Baldy is president, and L. K. Rishel, treasurer. The establishment owed its origin to a number of practical incoverages, who were designed. of practical ironworkers who were desirous of experimenting with the co-operative idea. The company was formerly called the Co-operative Iron and Steel Works, and the name was changed October 9, 1883, to the Danville Steel Company. Peter Baldy, the president, is also in the dry goods business, and his failure is reported, with liabilities of \$112,000. Judgments for over \$69,000 have been entered against him.

A French inventor who has patented a machine for the use of concentrated solar rays as a general motive power has set up three of his machines in Algeria for the French Government. He is now carrying on experiments at the Island of Porquerolles, near Hyeres, in France, where he is thrashing Indian corn and raising water by the action of the sun's rays.

The authorities of Geneva are at present considering a project for lighting the city by electricity, deriving the necessary power from the current of the River Rhone. Their The Youngstown Car Manufacturing Company have all the orders they can fill until short time, and, if considered practicable, after January.

WHOLESALE METAL PRICES, November 14, 1883.

METALS. | HON.—Duty: Bars, 8-10g to 11-10g 質 取; provided that no Bar Iron shall pay a less rate of duty than 35g. Sheet, 11-0g to 15-10g 質 取. Band, Hoop and Seroll, は to 14-10g 質 取. Railroad Bars weighing more than 25 取 愛 yard, 7-10g of 1g 夏 取. Foundry No. 2 # ton \$20.00 @ 21.00 Gray Forge. # ton 19.00 @ 19.00 # ton 18.00 @ 19.00 Scrap. Wrought, \$\partial \text{ton, from ship and yard..22.00} @ 24.00

Galvanized, 27
Galvanized, 27
Russia
American Cold Rolled B. B B D @ 716
Iron Wire. See Wire.
STEEL.—DUTY: Ingots, Bars, Sheets, &c., valued at 4¢ \$\partial D\$ or less, \$4\partial s\$ ad. val.; valued above 4¢ and not above 7¢ \$\partial D\$, 2¢ \$\partial D\$ is valued above 7¢ and not above 10¢ \$\partial D\$, 2\partial c\$\partial D\$ is valued above 10¢ \$\partial D\$, 2\partial c\$\partial D\$ is valued above 10¢ \$\partial D\$, 2\partial c\$\partial D\$ is valued above 200 \$\partial D\$. Extras.—Steel Bars, Rods, &c., cold hammered or polished, in any way in addition to ordinary hot rolling, 1\partial c\$\partial D\$ is in addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates, 1¢ \$\partial D\$ is addition to above; Steel Circular Saw Plates.

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English Steel.		
Best Cast	D	15360
Extra Cast	98	16360
Circular Saw Plates	TD	16 €
Round Machinery, Cast	lb	10 €
Swaged, Cast	ID	18 €
Best Double Shear	B	1536¢
Blister, 1st quality	di	13 €
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Coke Tin Plates. Best. Ord	linary.
I C 10v14.)	
I C 10x14 t \$5.75 \$5.25	@ \$5.50
	@ 5.75 8.50 11.50
Terne Plates,	
Prime Char. 2d. quality Co	oke.
I C 14x20 M. F. @ \$7.75	
I C 14x20\$5.50 @ 5.6214 \$5.8714 \$5.25 @	\$5.3716
I X 14x207.50 @	
I C 30x2811.00 @ 11.25 10.75 10.00 @	10,50
IX 90x9811.50 @	
I C 20x20013.50 @	- 1
Tin Boiler Plates.	
IXX 14x26, 2 sheets for No. 7, 112 sheets @	\$13.50
IXX 14x28, 2 " No. 8, " 6 IXX 14x31, 2 " No. 9, " 6	0 14.50
COPPERDUTY : Pig, Bar and Ingot,	4¢ : Old
Copper, 3¢ W D. Manufactured (includ	
articles of which Copper is a component of	of chief
value), 35 % ad valorem.	
Ingot, Lake 1516¢ (
	@ 15 ¢
Braziers' Copper, ordinary sizes,	
19 Oz. W mq. It. and over	P 750 6
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14x48, by the case		50	aha	of t	R/A
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For timing both sides, dodoic t	uc i	awore.	CP 1117	CUL	Sec.

O'Nelll's Patent Planished (opperNet.
12 and 16 oz. and heavier.35¢ By the	case. # 10 84¢
7 in., 14x52. 8 in., 14x56. 9 in.	, 14x00.

	Boiler Sizes.	
	7 in., 14x52. 8 in., 14x56. 9 in., 14x60.	
14 and	16 oz. and heavier. 37 By the case. 3 fb	86¢
	(And all sizes not over 20 in. wide.)	
14 and	16 oz. and heavier	39¢
12 oz	- 11	400

Sheathing Metal.

BRASS AND GERMAN SILVER. Brown & Sharpe's Gauge the Standard for Metal; Old English Gauge the Standard for Wire. BRASS MAXTPACTREES PRICE LIST.—DIS, 35 x For less quantity than 100 D, add 3¢ % D.

Sheet	ts wider	than 80	in. and	ov	ader er	40 in		50
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	4.6	6.6	6.6	20	6.6	30	9.5	.49
	6.6	6.6	6.6	80	6.6	40	6.6	.58
	6.6	W	6.6	40	in			59

)	Gilding Metal 8¢ \$ 10 more than High Brass.
)	Platers' or Gold Metal Sawed
	Planed or Polished
)	FOR SLITTING.
)	Metal, in width 2 in. to 16 in. to No. 28, inclusive.
)	₩ b advance.
)	Metal, in width 2 in. to 1 in. thinner than No. 28,
)	12 D advance.
	Metal, in width 1 in. to 1/4 in. thinner than No. 28,

v	5¢ W ID advance.
0	Metal, 14 in. in width and less, 10¢ 10 th advance.
	Any of the above widths cut to particular lengths
Ó	add 76 % D.
	Tubing.—Dis. 30 %.
	Plain to No. 90, inclusive, above ¼ in. to 3 in. \$0.43
P	Nos. 21, 22, 23, 2¢ advance on List for each Number.
Ė	Nos. 24, 25, 26, 4¢ advance on List for each Number.
ė	Above No. 26, special rates.
0.00	Plain 14 in
	3-10 th 4.10
6	" ¾ in 1.60
6	All Mandrel Drawn Tubes, 5 cents advance on
4	List Prices.

	All Mandrel Drawn Tubes, 5 cents advance on
	List Prices.
	Fancy Tubing to No. 90.
	English, Scotch and Extra Patterns Fancy
	Tubing to No. 20.
	Tubing Sawed or Cut 2 to 4 feet long, 2¢ ad-
	vance on List.
	Add 2¢, 114¢ for each additional cutting under
	to 2 feet.
	All Mandrel Drawn Tubes under 36 in., 25¢ 7
ı	D advance.
1	Witnessiamonne Die 90 f

Miscellaneous.—Dis. 30 %. Brass Pail Ears
Rrass Door Rail
Brass Door Rail43
ScrapNet.
High Brass\$0.10
Low "
Gilding
Gilding
Terms-Net cash. Interest to be added after
thirty days.
Brass Wire See Wire,

	Germ	an Si	lver	Tub	ing	-dis 80 %	
4	per cent.		80.80	15 pe	er cen		\$1.8
6	per cent.		.90	16 pc	er cent		1.43
9	per cent.		1.00	18 pe	er cent	t	1.5
12	per cent.		1.20	20 pe	er cent		1.6
	erman S						
		I	Dis. 80	@ 85	6.		
				M	arket	Metal.	Wire.
4	per cent,	12 in. to	No. 2	6	80	.52	\$0.70
	B. A.A.	6.6	6.0			.56	276
6	40	4.0					

10	6.6	44	6.6		64	.88
15	4.6	6.6	6.6		74	1.08
18	6.6	6.6	6.6			1.15
G	erman	Silver Sh	eets or	ver 12 in	. wide an	d weigh-
ing	12 m. S	1 : more	than 1	6 lb. 82	18 m.	
A	dvance	2¢ for	each a	addition	al inch i	n width
abo	ve 12 in	a., and 9¢	W ID O	n each	No. thinn	er than
Nos	. 26 to 8	36, inclusi	ve.			
A	ll Germ	ian Silver	thinn	er than	No. 36 is 1	Platers',
		additions				
Gi	erman	Silver Sci	ap, or	e-half I	ess than n	et price
of 1	2-in. M	arket Me	tal. (Jerman	Silver T	irnings,
Fili	ags and	l Chips, h	alf the	price o	of Scrap.	
W. WC	AD	Dury: F	Mr. 89	39 100 fb	; Old Le	ad. 26 W
		and Shee			, 014 20	
Ame	erican.				4360	@ 436e
Bar						66
Pipe					634¢,	dis 10 %
Tin	Lined I	Pipe			15¢,	dis 10 %
Shee	t				7360,	dis 10 %
Shot				Dı	rop, 7¢; I	Buck, 8¢
Chil	led Sho	· P				80

I m; ripe and sheet, of the m.		
American 4 Bar Pipe 60 Tin Lined Pipe 1	36¢ @	436
Bar		64
Pipe	ke, di	s 10 g
Tin Lined Pipe	Se, di	s 10 1
Sheet	60. di	s 10 s
Shot Drop, 7¢	; Buc	k. 80
Chilled Shot		8
NICKEL.		
Metallic, in grains	39 Tb	\$1.00
Metallic, in grains, \$\partial 100 tb lots		1.00
Metallic Anodes	.85 @	1.40
Nickel-Plating Material	20 0	e0 0
Composition, Cutting	da In	\$0.07
Composition, Cutting in bbls	44	.03
Composition, Emery Cake	8.6	.07
Composition, White Tripoli	4.6	.10
Sulphate and Ammonia		.40
Nickel, Chloride	6.6	1.00
Nickel, Chloride and Ammonia	0.6	.63
Acid, Muriatic, 20°	6	.04
Acid, Nitrie, 88°	*	.10
Acid, Sulphuric, 66°	+ 6	.04

	Rouge, hard and soft, for Nickel	4.6		.90
	Ammonia Water, 28° U. S. P	4.5		.14
6		4.6		.60
	ANTIMONY.			
	Hallett's			10¢ 11¢
2	SPELTER—Duty : Pigs, Bars and Plat 读 100 lbs. American, cash			
-	ZINC-Duty: Pig or Block, \$1.50 P Sheet, 2140 P D. 600 b casks			
	Zine Tubing-Dis. 25 %.			
	Plain Fancy Scotch and Extra Patterns.			.27 .88 .83
-	BABBITT METAL.	50	95	94

00 to 9,			is, 14,			18
10	11	1136	1216	14	15	16
ht Marke	et Wire.			dis 5716	60 60	0
Charc	oal			dis 45	@ 47	169
ENGLIS				dia 55	@ 57	299
				la BELL	0 00	1
Cinana	BB74 max BJ	on 10	to 2.4			
Resser	ner Stee	Wire	d	ia 5914	70. NN	9
ered Ma	rket Wir	0	d	is 5216	7. 55	9
1 Del	a Wina	Nos 2	to 19 d	ia 50	S 501	60
Dill						
	10 ht Marko Chare Bale Saled Ma Fence Grape Besser sered Ma	10 11 nt Market Wire. Charcoal Bale Wire, No aled Market Wir Fence Wire, N Grape Wire, N Grape Wire, N Bessemer Stee	th Market Wire. Charcoal. Bale Wire, Nos. 7 to aled Market Wire. Fence Wire, Nos. 8 a Grape Wire, Nos. 10 Bessemer Steel Wireered Market Wire.	10 11 11½ 12½ th Market Wire. Charcoal. Bale Wire, Nos. 7 to 12. saled Market Wire. Fence Wire, Nos. 8 and 9. d Grape Wire, Nos. 10 to 14 Bessemer Steel Wire. dered Market Wire.	10 11 11½ 12½ 14 th Market Wire	saled Market Wire

	Stol	ne	or	W	eav	ing	W	Vire	B.		
Nos	. 16	17	18	19	:30	21	22	28	24	25	26
Cents	. 14	15	16	19	20	21	202	28	24	25	26
Nos	. 27	228	29	80	81	83	33	81	35	36	
Cents	. 98	29	80	8.3	88	85	87	40	45	55	
Cents Nos. 16 to	18						. dis	. 573	60	60	5
18 60	D 120							UU	G/B	025	6.5
27 %	36							623	6 60	65	22
Galvanize	ed St	one	Wir	10			. 86	45	0	4734	65
			Ste	el	W	ire.					
Cast Stee	l, Ste	el V	Vire	list					di	8. 54	20
	Bra	58	ane	d ('op	per	W	Ire			

													30 @				Gi	ld'g a	und
)	В	i	gh	Brass	Lo.	185	Brass		Cop'	d.
No.	0 t	0	2	0								. 8	0.33		80	.87		80.4	6
No.	21												.36			.40		.4	6
													.87			.41		.4	2
No.	28												.38			.42		.4	8
													.40			.44		.5	
													. 43			.47		. 8	8
													. 45			. 49		. 5	
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vo.	200												.52			.50		. 6	8
io.	20.		*										.55			.50		. 6	6
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io.	81.												. 62			.66		.7	8
10.	33.												. 66			.70		.8	4
10.	33.												.70			.74		. 9	3.
													.74			.78		1.0	8
Bp	rin	8	V	Vi	8	e	2	ç		¥	ø	D	advar	ace.					-

For less quantity than 100 b, add 3c 2 b, High Brass. All Nos. not thinner than No. 25, wider than 2	No. 33	Pine Tar, bbls Pitch Putty, in bladders in bulk
in, not wider than 13 is	vance on itound Wire. Fancy Wire, not less than 10¢ \$\mathbb{\pi}\$ \$\mathbb{\text{lb}}\$ advance on Round Wire. Brass Rods, No. 8 and larger, not less than 2 ft. lengths, 28¢.	Resin-Common and Go E&F. G&H. I&K M&N Spirits Turpenting.
160 ≥ 10 advance on each No. above Nos. 28 to 88, inclusive. All Brass thinner than No. 38 is Platers' Brass, at 58¢ Sheets 24x 26 in., and all sheets cut to particular	Wire straightened and cut, smaller than No. 8 and not less than 2 ft. lengths, 434. Wire and Rods less than 2 ft. lengths, special rates.	Whitne, Spaniso
sizes and lengths under 30 in., in width wider than 2 in	Twelve couts & D extra for spooling on 1 D spools to No. 36.	Waste No. 2 C nored Waste Washed Machine

MISC	E	1	4	I	d.	A	1.1	•		E	2	0							1	N	1	8	1	H	9	9		700	31	1	r	0	•	(K		,
16 & 16, Extra	V	V	a	r	T	8	E	11	te	31	d															*		*	×		,	*		1	4	K	1	
Extra No. 1					*								K	*						×					,		٠	,	*					1	1	16	¢	
					•		•		•				•			1																			,			

1	ATOL BELLEVILLE CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR	*7
	Rivets.	
	Iron and Tinned, new list, Dec. 10, 1881dis.	40
	n bulk, new list, Dec. 10, 1881dis.	
1	Copper Rivets and Burrs dis.	50
	Nos., 7 8 9 10 11 12 13 14 1	5
	79 lb., 49e 50e 52e 54e 56e 58e 60a 65e 70	娇
	Stove Bolts.	
	American Screw Co.'sdis.	
]	R. B. & W	41
	R. & E. Mfg. Codis.	50

GLASS. Prices current per box of 50 feet. List, July 2, 1888.

18 x 22 to 20 x 3) 16.50 17.00 15.50 14.0 15 x 26 to 24 x 3) 20.50 18.50 16.25 26 x 23 to 24 x 36 22.00 20.00 17.50 26 x 32 to 24 x 36 22.00 20.00 17.50 26 x 36 to 30 x 44 24.00 22.00 18.50 30 x 54 to 31 x 50 26.00 24.00 30.50 30 x 52 to 31 x 54 27.00 25.00 27.00 31 x 56 to 34 x 56 29.00 27.00 24.00 31 x 56 to 34 x 56 31 x 50 31.00 29.00 30 x 60 to 40 x 60 35.00 31.00 29.00 Double.	Sizes.	1st.	241.	ad .	4th
34 x 58 to 34 x 60	11 x 14 to 16 x 24. 18 x 22 to 20 x 30. 15 x 36 to 24 x 30. 26 x 23 to 24 x 36. 26 x 96 to 26 x 44. 26 x 46 to 30 x 50. 30 x 52 to 30 x 54.	14.50 18.50 20.50 22.00 24.00 26.00 27.00	13,50 17,00 18,50 20,00 22,00 24,00 25,00	12.50 15.50 16.25 17.50 18.50 20.50 21.50	\$10.5 11.5 14.0
Sizes. 1st. 2d. 8d. 4th.	34 x 58 to 34 x 60	\$1.00 \$5.00	29.00	26.00	
	Sizes.	1st.	2d.	8d.	4th.

Sizes.	185.	za.	ad.	4th
6 x 8 to 10 x 15	\$17.50	\$15.00	\$14.00	\$18.
11 x 14 to 16 x 24	20.00	18.00	16,50	-
18 x 22 to 20 x 3)	24.00	22.00	20,00	
15 x 36 to 24 x 80	26,50	24.00	21.00	
26 x 23 to 24 x 35	29.00	26.00	28.00	
26 x 36 to 26 x 44	80,00	28.00	24.00	
26 x 46 to 30 x 50	88.00	31.00	27.00	
30 x 52 to 30 x 54	85,00	82.00	28.00	
80 x 56 to 84 x 56	87.00	84.00	80.00	
84 x 58 to 84 x 60	40.00	87.00	88.00	
35 x 60 to 40 x 60	48.00	40,00	87.00	

Sizes above—\$15 per box extra for every 5 inches. An additional 10 per cent, will be chared for all Glass more than 40 inches wide. All sizes above 52 inches in length, and not making more than 81 united inches, will be charged in the united 84 mores bracket. Discount, 60 and 15 to 70.

PAPER STOCK, &c. (Dealers' Selling Prices.)

(Denters	ASCREBITE	A ricea.		
			Cents	30 B.
White Shirt Cuttings.	No. 1		7 68	750
White Shirt Cuttings,	No. 2		814 GB	6
Mill Assorted Whites	*****	*********	114 (2)	014
Unbleached Muslins	**********	**********	612.0	278
City Whites. No. 1		**********	079 (8	484
New Canton Fiannels.		**********	478 19	275
New Canton Fiantiers.	*** *****		-1/ 0	034
New Seconds, light		**********	326 9	339
dark			274 98	3
No. 2 Whites	********	*********	256 6	296
Cotton Canvas	********	*********	429 @	424
Linen Canvas No. 1		*********	434 @	429
Seconds, City No. 1			136 @	194
Seconds, City No. 2			1 3	254
Colors, # cwt			70 66	90
Manila Rope			236 @	3%
" Tarred			236 @	39a
Gunny Bagging No. 1			194 40	2
NO. 2			236 CB	286
Kentucky Bazging			4 (0)	- 24
Burlad Bagging No. 1			214 (4)	216
Tar Shakings			184 (0)	9
Hemp Twine Stock Hard White Shavings,			12 2	486
Hard White Shavings.	No. t		1 0	478
Soft White Shavings, N	0.7	*********	236 60	224
White Shavings, No. 2, 8	Boffe	*********	374 0	379
Mixed Shavings, part V	Vhite	**********	214	3
Ledger and Writing	· M100		479 W	314
Solid Stock		********	-82 (0	3,3
Book Stock, No. 1, light		********	278 W	258
Old Newspapers		*********	114 (0)	129
Dune Maniles	*********		128 98	174
Pure Manilas Bogus Manilas and Har		*********	174 00	3
Course manifes and Har	dwales.		74 (8	1
Commons, per 100 lbs			D2 68	70
Binders' Board Cutting		********	76 (6	1

PAINTS, OILS, &c. Paints.

	" Dest	. 1
2	Black Paint, in oil kegs, 8c : assorted cans, rrc	а
	Bine. Prussian, fair to best	ч
6	Black Paint, in oilkegs, 8c; assorted cans, 11c Blue, Prussian, fair to best	П
7	" Chinese dry	а
0	" Ultramarine	П
õ	Brown Spant-h	
ŏ	" Van Deke	
3	Green Corouge	. 1
	" Van Dyke	1
4	4 Paris	1
0	raris	1
4	in oilgood, 300; best. 450	1
ő	Iron Paint, Bright red # 2 24c	1
4		1
	Furpio	1
0	Ground in oil, Bright Red 4 650c	1
	# # Red # 5320	1
		1
ř	Purple " oc	1
	Mineral Paints2 6 40	1
	Orange Mineral	1
,	Red Lead. American70	1
- 4	Venetian (Eng.) dry	ı
1	" in oilasst'd cans, 110 : kees &c	1
	" Indian dry	1
٠	Rose Pink 10 120	1
. 1	Sienna, American Raw, powdered	1
1	" Burnt pewdered	ı
1		1
. 1	" Raw 15 @ 15 @ 250	ı
. 1	Umber, Burnt, powdered4 & 8c	ı
ч	" In oil	ı
ı	H Daw powdowed	ı
ł	" in oil	Ł
	Vermillion, Chinese	1
1	Probleh	ı
1	English	ı
1	White Lead, American, pure dry	ı
ł	" " In oil	L
ı	White Paris. English prime in bbis 2 (2) 2160	P
1	Vollow Ook so Franch	l.
ı	Yellow Ochre, French	L
1	Vermontin casks, 11c; kegs, 8c	ı
ł	Yellow Chrome	ı
1	tenow chrome	ı
1	7 in oil	ı
١	Zinc White, American No. 1 dry	ı
ı	French (Paris dry)8 @ 100	
ı	41 Prentite (Paris dry)	
ı	" in oil	
ł	Oils.	
П	Liuseed, Raw, in casks and bbls	
ı	" Botted " " "	
ı	Calcutta	
1	Bleached Whate, # gal	
1	" Sperm 820	
1	" Elephant	
1	Signal 75 1	
	Prime Lard	
П	No. 1 Extra 6oc	
П	West Virginia 12 @ 18:	
	Orilling40r	-
	Minary All	

16.	Yellow Ochre, French
-	Yellow Ochre, French in ollass'd cans, 11c; keg
16	
. 0	Yellow Chrome
164	1B OH
160	Zinc White, American No. 1 dry
	No. 1, in oil
%	" in oil10 (
	Oils.
200	Linseed, Raw, in casks and bbls
%	" Botled " " "
65	Boiled " " " " " " " " " " " " " " " " " " "
68	Bleached Wuase, # gal
8 %	Bleached Wuaic, # gal
	* Elephant
-	Signal
26	Prime Lard
26	No. 1 Extra
**	West Virginia 12 @
	Miners' Oil42 @
5 %	Fign Oil, erossed
65	Man Oil, ressed
56	Tallow
65	Empire Cylinder Oil
	М выпамку
	Eagine
2 5	Engine
2 0	Engine
nd	Eagine Sundries. Asphaltum, Cuban
	Eagine. Asphaltur Cuban 64 2 3 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	Eagine
	Eagine. Asphalture, Cuban
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	Eagine. Asphaltur. Cuban
	Eagine. Asphaltur. Cuban
	Eagine. Asphaltum: Cuban
	Eagine. Asphaltum: Cuban
	Eagine. Asphaltur. Cuban Egyptian Bensine Galk Block Dyers Fatent, Am'n Sheet Glasien' Foints, Zine Gung, Copal Damar. Bheliac, English dark Litharga Wool, ordinary, per lb Litharga Wool, ordinary, per lb
	Eagine Sundries
	Eagine Sundries
	Eagine Sundries
	Earline Sundries
nd	Earline Sundries
nd	Earline Sundries
	Eagine. Asphalture, Cuban Egyptian Bensine Galk Block Dyers Fatent, Am'n Block Cotten Block Block Cotten Clasters Benet Clasters Cl

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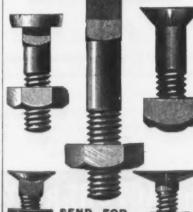
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MANUFACTURERS OF ALL KINDS OF

BOLTS & COLD PUNCHED NUTS



WASHINGTON NOTES.

(From Our Own Correspondent.) WASHINGTON, D. C., Nov. 14, 1883.

The elections having been disposed of, the approaching session of Congress and the Speakership are beginning to attract general attention. The unexpected turn in public sentiment indicated in the results in Pennsylvania, New York and Connecticut, and the political straws showing the direction of the winds of popular favor in other localities, will have more or less influence in shaping the organization of the House of Representatives on the basis of agitation or no agitation of the tariff.

THE SPEAKERSHIP.

The friends of the principal candidates for the Democratic Speakership are already in the field, and are naturally full of enthusi-asm for their chosen candidates. Their cal-culations are in most cases the merest froth. Of the principals in this contest, ex Speaker Randall has been in the city for some time, and is managing his own affairs in person. and with his usual adroitness and tangible results. Mr. Carlisle arrived several days ago, and on the way are Messra. Morrison and Springer. Mr. Cox will be here in a few days. Senator Beck and other notorious free traders of the Senate and House are either already in the city or will be here shortly, to take a hand in support of Carlisle. The contest, notwithstanding the would be candidates and dark horses, has narrowed down to Rendall and a conservative tariff policy, and Carlisle and a reopening of the question and an aggressive course in support of free trade. The object in either case has reference to the approaching Presidential campaign. The Randall men believe that a do-nothing course would strengthen the party before the people, particularly in the West and South, and the Carlisle men assert that popular sentiment is in favor of their own ultra views, and that what would be gained in the manufac turing States by a conservative course would be more than counterbalanced in the agri-cultural States by an advanced position in favor of free trade.

SPEAKERSHIP FIGURES.

There has been considerable figuring on the prospective vote of the Democrats of the House on the question of candidates. The predilections of the parties generally The predilections of the parties generally shape the results. As a sample of these calculations it may be stated that the Carlisle men concede Randall the following vote: Alabama, 3; Arkansas, 1; Connecticut, 3; Delaware, 1; Florida. 1; Georgia, 1; Indiana, 1; Louisiana, 3; Maryland, 4; Massachusetts 1; Mississippi, 1; Missouri, 1; Nevada, 1; New Jersey, 2; New York, 1; North Carolina, 1; Ohio, 2; Pennesse, 1; Yania, 12: South Carolina, 1: Tennesse, 1: vania, 12; South Carolina, 1; Tennessee, 1; Texas, 2; Virginia, 2; Wes Virginia, — making a total of 50. On this basis the Carlisle men tickle their hopes with the fact that there still remain 100 votes, and that 96 would be required to nominate. According to this Mr. Carlisle will require the entire residuum of votes, m nus four. To less en-thusiastic individuals this would be regarded as rather a slim chance, as Mr. Cox claims a few votes at least.

SPECIMEN CALCULATIONS OF RELATIVE STRENGTH.

The mildest estimate, however, is one which has been very generally circulated showing the relative strength of candidates as far, it is claimed, as the members have committed themselves, as follows: Carlisle, 34; Cox. 13: Raudall. 11; Springer, 2; non-committal, 65, or about 50 short of the probable vote in caucus. The absurdity of this statement is shown in the fact that the strength conceded to Randall is less than that which has been tendered to him in his own State, and his friends at the same time concede a larger vote than that claimed for Carisle. It will be seen by this that the friends of the rival candidates, thus early in the game, are indulging in a little bluff in the absence of any authenticated facts. The question might be added, what has become of the So written proffers of support which Mr. Randall had received up to last May? He and his friends are quiet and confident, which leads to considerable anxiety on the part of his antagonists, the field.

PROSPECTIVE TARIFF AGITATION.

It looks now as if the tariff question would lead to some lively parliamentary conflicts, no matter which way the Speakership turns. A large and influential element in the Democratic party is in favor of reopening the tariff question. Among the Republicans the general sentiment of the party is opposed to reviving the agitation, though there are many who desire an adjustment of the wool question at least on the pasis of the old duty. old duty. These facts may open the way, and, once open, it would be impossible to say where the matter would end. THE REPUBLICAN COMPLIMENTARY VOTE.

The complimentary vote of the Repub-licans for the Speakership will be given to ex-Speaker Keifer.

Adjustable Sieves .- All who have occasion to employ sieves for different pur-poses are aware of the necessity of using those with different meshes in order to ac-complish the sorting of grain, seeds and other materials in the most satisfactory man-ner. The idea of a sieve so constructed that the mesh can be changed at will, wirhout the necessity of removing the material from it, is one that must commend itself to all who have occasion to use such an article. The Milton Sieve Company, Limited, Milton, Pa., are manufacturing an article of this kind. Instead of having a round form, as is customary with many kinds of sieves, this has a square or rectangular rim, and the change in the mesh is caused by jointed corners of the rim, by which it can be compressed so as to be diamond or lozenge shape, instead of square. Of course, each intersection of the wires forming the mesh of the sieve is correspondingly affected, and therefore the mesh is

tained of any desired size. The manufacturers state that sieves of this kind will separate rye from wheat, and clean grain from cockle and all foreign seeds. The statement is a'so made that they will clean clever seed from the various weeds with which it may be mixed. It is especially desirable for cleaning garden seeds

The Bochum Steel Works.

Messrs. Woltman & Mickerts, of 78 William street, New York, sole agents for the United States of the Bochum Mining and Steel Works, of Bochum, Westphalia, have favored us with a catalogue giving some very interesting particulars relative to the above establishment. It is furnished with numerous engravings illustrating the general arrangement of the various departments, and also the accommodations for the work-men, but we regret that the extensive character of this particular portion precludes the possibility of here giving it the attention it merits. The following brief abstract, however, will undoubtedly prove interesting: The steel works were erected some 40 years ago, and, though having assumed but moderate proportions in the first 27 years of their existence, now occupy a prominent position. The number of workmen now employed amounts to 4600, to which, however, should be added those engaged in the coal and iron mines, bringing the total number up to 6400. The greater proportion of the fuel employed in the works is obtained from the Maria Anna and Steinbank Colliery, about a half mile distant, railroad communication facilitating the transportation of the materials. The output amounts to something like 250,000 tons per annum, and the coal is reported to be of a remarkably good quality, containing from 4 to 5 per cent. asb. The colliery furnishes employment for 1040 men.

The iron-ore mines in the Siegen and

Nassau districts produce no inconsiderable proportion of the total quantity consumed in the company's blast furnaces. The spathic iron-ore mines at Kirchen are considered specially valuable, yielding an annual outspecially valuable, yielding an annual output of from 40,000 to 60,000 tons. Two of the coke blast furnaces, situated near Mühlneim, on the Rhine, and formerly producing 50,000 tons per annum, are now out of blast, while three others at Bochum of larger capacity are now regularly turning out 120,000 tons a year. A large number of solve or are in open to be observed and in open to be of the product of the country and the product of the pr coke ovens are in operation both in Bochum and at the Maria Anna and Steinbank Colliery The product of the steel works comprise crucible, Bessemer, Martin and basic steels and ingot iron, and the forge is equipped with 38 steam hammers. The Bessemer department contains six converters, and the output is worked up principally into rails. Twelve locomotives and 350 cars serve for transporting materials, and the total length of track in use amounts to about 18 miles. Motive power is furnished by a large number of steam engines developing about 800 horse-power, steam being supplied by 18-boilers, and, in addition, the works are well supplied with hydraulic apparatus.

Trying to Beat the Record.

Although an exceptionally large output or unusually rapid work is more naturally ex-pected of ir n and steel works in times of brisk demand and high prices, yet instances of that character are not unc mmon in this country, even in these days of dull trade and hesita ing demand. Our iron and steel works managers have not lost their spirit of emulation, but are evidently as anxious as ever to distinguish themselves by their industrial achievements. Two pra seworthy cases of this kind have come under our notice this week, one being a large output of pig iron and the other being very rapid work in the conversion of Bessemer steel.

The Crane Iron Company, of Catasauqua, Pa, had only three of their five furnaces in Pa, had ouly three of their five furnaces in blast in October, but turned out 4354½ gross tons of No. I foundry iron, 900 tons of No. 2 foundry, and 138 tons of No. I mill, or 5392½ tons in all, being an average of nearly 1800 tons per month to each furnace. The fuel used was anthracite coal, except in the case of one furnace, in which the fuel used was one-fourth coke. The ores were native Lehigh County hematites and New Jersey magnetics, one-half each. As the Crane magnetics, one-half each. As the Crane Iron Company were the first to make anthracite pig iron successfully as a regular product that they were not deficient in enterprise in their mature years, but are keeping up very well with their competitors. The credit of much of the good work of the Crane Iron Company is due to Mr. Joseph Hunt, the efficient furnace superintendent.

The converting department of the Scranton Steel Company, of Scranton, Pa., on the oth inst., with two converters, made 60 heats in 11 hours and 43 minutes, which is a little better than five heats per hour. It is believed that this number of heats has never been equaled in the same time anywhere in the world, with two converters Many of the heats were made in 10 minutes each. It is also worthy of note that one of the converter bottoms used on the day referred to made 42 heats, which is perhaps the best service ever obtained from one converter bottom.

The Belgians, in these days of close competition, have lost aone of their former commercial push in utilizing foreign markets. Not only South America, but Asia and Australia, bear testimony to their enterprise. tralia, bear testimony to their enterprise-Take, for instance, the Belgian Expertation Company, which was formed two years ago to promote trade with Polynesia; we see that from a turnover of \$3,000,000 during the past year, a profit of \$149.540 has been realized. A dividend of 10 per cent. has been declared, and it has been decided to dcuble the capital of the concern.

The Director General of the World's Industrial Cotton Centennial Exposition at New Orleans has invited designs for the main building, which is to embrace 1,000,000 square feet. The floor space is to cost \$250,000. Plans will be received until noon of ingly affected, and therefore the mesh is changed in a proportionate degree by changing the shape of the sieve. One corner of the sieve is provided with a segmental shaped gauge, by which the sieve can be held in any desired position, or, in other words, the mesh main-

NEW PUBLICATIONS.

ECHANICS OF ENGINEERING AND OF MACHINERY. By Dr. Jules Weisbach. Vol. III. Part I. Section I. Mechanics of the Machinery of Transmission. Translated by J. F. Klein, of the Lehigh Univer-sity. Size, 6 x 9 inches; 544 pages; 445 illustra-tions. Bound in cloth. Published by John Wiley & Sons. Price \$5.,

This volume is the first installment of the second edition of what was formerly known as Volume III of Weisbach's "Mechanics of Engineering." So much new material has been added by Professor Herrman, and the material of the first edition so thoroughly classified, revised and the discussions improved, that it practically constitutes a second edition. Each of the three volumes is as large as the original Volume III. The divisions Part I, Mechanics of Transmission; Part II, Mechanics of Machinery for Lifting and Transporting Solid and Fluid Materials, and Part III, Mechanics of Machinery for Changing the Form and Size of Materials. The introduction, covering 58 pages of fine type and embracing 33 cuts, is devoted to kinematics as essential to the remainder of the work. The author treats it as oure mechanics, and it has special relation to the theory of transmitters given in to the theory of transmitters given in the volume. In looking it over it really becomes a que tion whether this portion n future editions may not be considerably expanded and take its place in the series. The work covers almost everything in the way of mechanical movements. We notice among the leading chapters journals, shaftamong the leading chapters journals, and ming, couplings and bearings—couplings including everything from drag-links and universal joints to friction clutches and ratchet-wheels. In journal-boxes and pillowblocks a variety of styles, embracing the best foreign practice, are shown. Steps and upright bearings can hardly be considered sati-factory. The chapter on gearing is full, and embraces skew, bevel, differential, pan-circular, and finding in the latest and finding the latest and latest and finding the latest and latest non-circular and friction-wheels; belts, belt pulleys, tighteners, guide belts, &c., have considerable space to themselves. Rope and belt gearing, as it deserves, gets considerable attention. The same is true of stepped cones and conical drums. The general subject of spur-wheels, toothed sarfaces, forms of teeth and their development are treated at great length. Almost every phase of the subject seems to be considered. About 125 pages are devoted to it. Guiding mechanism. e-pecially the so-called parallel motions, receives an amount of space and attention out of all proportion to its value. After describing nearly every parallel motion hat has been proposed within the past hundred: years, it takes up and discusses Peaucelliers' linkage, and concludes by saying: "It is the only known system of inks which converts an oscillating circular notion into an exact rectilinear motion without the intervention of slide bars." In view of this remark, and the fact that the bject of a para lel motion is to secure movement in a straight line, it would seem that a large portion of the matter under this head was superfluous, to say the least. Those who have seen the top of a piston-rud furnished with a Watt parallel motion making a figure 8 in the air and wearing on alternate sides of its stuffing box, will hardly consider an approximation to a straight line of sufdecient value to make it worth discussion.
The remainder of the work covers a variety of topics involving the same general princi-ples. Taken as a whole, it is a very satis-factory chapter in the series. Illustrations and printing are both excellent.

THE ELASTICTY AND RESISTANCE OF THE MATERIALS OF ENGINEERING. By William H. Burr, C. E. Published by John Wiley & Sons. Size, 6 x 9 inches, 7.8 pages; numerous illustrations; bound in cloth. Price, \$5.

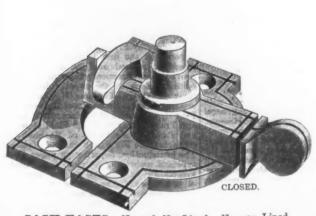
This book is an outgrowth of the Professor's lectures on elasticity and resistance of materials, given to the students of the Civil Engineering Department at the Rensselaer Polytechnic Institute. Very naturally, they have been elaborated and extended, and made to cover the details of the subject not included in any technical course of study. The work is divided into two parts. The first includes the theory of elasticity in solid bodies, hollow cylinders, thick hollow cylinders and spheres, and torsion, theory of flexure, &c. The theory or technical part is developed in Part 2. The first part of the work is designed for technical students. the work is designed for technical students, especially for those whose tastes and circumstances require inves igation in connection with the elasticity and resistance of materials. In Part 2 the author says the mathe matical results obtained in the first portion are subjected to the tests of experiment. These, of course, are compilations, but have been taken in all cases, so far as the author knows, from the most trustworthy sources. In every case, so far as we have looked, the author has with the utmost care given credit where credit has been due. In the produc-tion of this part of the work the author has evidently reduced to shape a vast amount of experimental meterial, changing the crude record of tests to a useful form, and reducing from one unit to another in order to make the work harmonious throughout. Much o Much of the matter, although credited to other authorities and to other authors, is substantially new, having been worked over and put into a shape to be practically useful to the engineer without the excessive labor which would be necessary in turning to the original authorities.

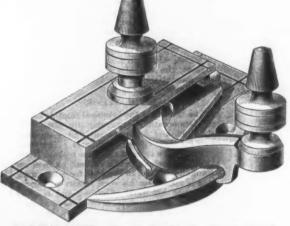
RECENT WONDERS IN FLECTRICITY, ELECTRIC LIGHT-ING, MAGNETISM, TELEGRAPHY AND TELEPHONY. By Henry Greer. Size, 8 x 10 inches; 105 pages; numerous illustrations, paper covers. Price, \$2.

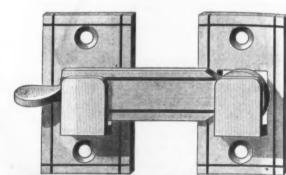
We are at a loss how to describe this pamphlet, or how to give an idea of its con-tents. It seems to be largely made up of extracts from various newspapers, together with photo-reproductions of the cuts that accompanied them. The price is out of all proportion to the value of the work to the general public or to the electrical engineer. We have previously mentioned a smaller work of a similar character by the same author, and having the same title. This seems to be the same work with additional extracts.

A vessel lately brought 2600 tons of iron ore from Greece to Philadelphia for the Pennsylvania Steel Works. This ore came from the Island of Seriphos.

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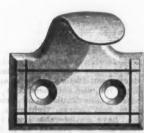


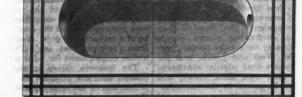




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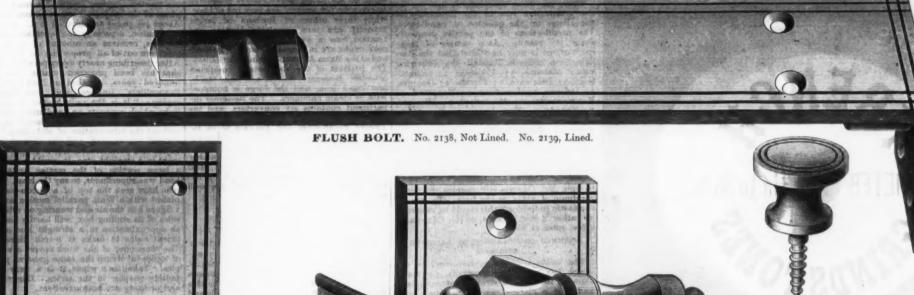




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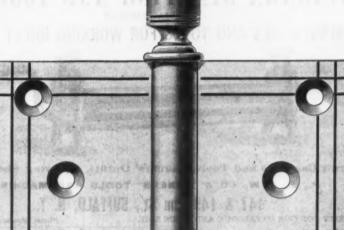
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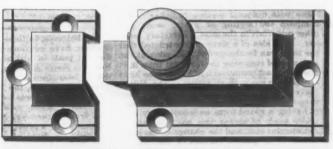
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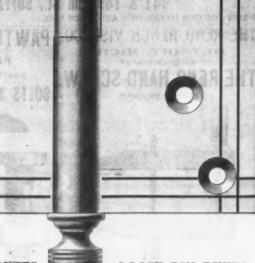


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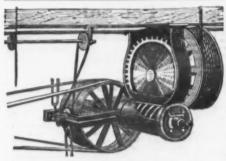
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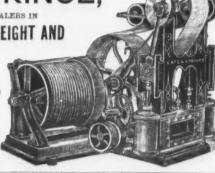
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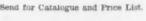
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Hodgson.-Plaster and Plastering Mortars and Cements. By Fred. T. Hodgson. 102 pages, 12mo.

This book is a complete guide for the plasterer in the preparation and application of all kinds of plaster, stucco, Portland, hy-draulic, Rosendale and other cements. The chemistry, qualities and uses of the various kinds of cements and limes are practically set forth, and rules are given for measuring, computing and valuing plaster and stucco work. The author has drawn freely from best works on the subject, and has embodied in the book a large amount of in-formation valuable to the trade. Under the head of "Miscellaneous Memoranda," a number of practical recipes are given. An illustrated Glossary of Terms used in plastering and plaster decorations adds to the value of the work.

Simpson .- Manual of Screw Cutting. By Wm. Simpson. 2d edition, enlarged and improved. 24 pages, 16mo, cloth, 1883.

This little book gives rules for calculating the change gear on scr-w-cutting lather, to cut square and angular threads, per inch or per pich, with two or four gears. Exam-ples are given under each rule. Tables for United States Standard and Whitworth's (English) Screw and Gas Pipe Threads are given; also the standard sizes of bolts and nuts, and sizes of tapping holes. The authoris a practical machinist and has explained his subject clearly.

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2 Bolt Cutters, to cut 1 / 2 and 2 in.

Send for lists of new and second-hand Tools.

The Geo. Place Machinery Company, No. 121 Chambers and 104 Reade Sts., New York.

Wanted.

A reliable Hardware Salesman, who is well acquainted with Eastern and Western Trade, to travel for Manufacturers of Hardware Specialtravel for Manufacturers, ties. Address, with references, "P. O. B.,"

Office of The Iron Age, 83 Reade St . New York. Acme Skates.

The enterprising house of HENRY BROOKS & CO., 115 Milk Street, Boston, has taken another important step in securing a very large stock the ce'ebrated FORBES PATENT ACME SKATES, which they are offering at prices which command the instant attention of buyers.

Wanted.

Oily Wrought Iron Turnings and Cast Iron Borings.

Name quantity, point of delivery and lowest

JOS. J. LIPPINCOTT & CO., 131 So. Fourth St., Philadelphia, Pa.

To correspond with traveling men who have busi ness with users of steam and machinery. Men traveling in the Middle, Western and Southern States preferred.

EAGLE IRON WORKS, Detroit, Mich.

LEIGH'S DISCOUNT BOOK

Specially arranged for the use of the HARDWARE TRADE Acknowledged by ALI, the best work of the kind ver published. Price by mail ONE DOLLAR.

Address E. B. LEICH, Sec'y The American Brake Co.. St. Louis. Mo.

Controlling Interest

in Hardware Store and Tinware Store for sale. Situated in one of the best towns in Southern New York. Doing business of \$50,000 per year. Business paying well. Reason for selling, in manufacturing business that takes nearly all my time. Address Office of The Iron Age, 83 Reade st., New York,

SITUATION WANTED.

by a young man, in a Hardware Store, to learn the business. Address

G. SAVAGE,

Wanted.

A Competent Man to take charge of a Gray Iron Fou dry employing about 100 molders, and mak-To the competent and to take charge of a Gray Iron Fou dry employing about to molders, and making nearly all light work. Must be sober, industrious, a thorough mechanic, and qualified to successfully handle men and preserve discipline. Address, giving all particulars.

"CASTINGS,"

Office of The Iron Age, 83 Reade St., New York.

WANTED—A Situation as Salesman or Man-ager of a Whole-sale or Retail Hardwa e House. . eventeen years' experi-nce in the whole-sale and retail trade. West preferred. Best of ref-erences given. Address "J. S. H. W.," Office of The Iron Age, 83 Reade st., New York.

WANTED-Situation by a Blast Furnace Managed works of the largest class has been secustomed to the calls and management of Mines Baitronds, and all official discussions where the security years experience; active a daccessome to work. Address West 129th Street, New York City.

SITUATION WANTED—Py a First-class Travelling Salesman, in the Hardware, Metal and House Fornishi g line, ilsa siso an experienced Euyer and an expert Bookkeeper and Accountant, Known and traveled all over the United States and Canadas.

Address "HARDWARE."

P. O. Roy 1985 "HARDWARE,"
P. O. Box (271,
New York City,

NoX. 6 Pue st. New York, N.Y.

**Anted. - a stuation as Superintendent or a country. Address (references, "OMPETEN1;" of references, "OMPETEN1;" of references,

Special Notices.

BARGAINS.

go-in, swing, 18 ft, bed, New Haven Lathe, 14-in, swing, 17 ft, bed, Bement, Marshali & Ball Lathe,

24-in. swing, 17 ft. bed, Bement, Marshall Lathe.
20-in. swing, 16 ft. bed, Perk'ns Lathe.
16-in. swing, 8 ft. oed, Hardey Fall : Lathe.
16-in. swing, 6 ft. bed, Perkins Lathe.
16-in. swing, 6 ft. bed, Perkins Lathe.
16-in. swing, 6 ft. bed, New Haven Lathe.
23 in. x 9 ft. bed, New Haven Planer.
23 in. x 9 ft. bed, New Haven Planer.
23 in. x 9 ft. bed, New Haven Planer.
23 in. x 9 ft. bed, New Haven Planer.
23 in. x 9 ft. bed, New Haven Planer.
23 in. x 9 ft. bed, New Haven Planer.
25 x 24 Horizontal Engine.
25 x 26 Horizontal Engine.
26 x 12 Horizontal Engine.
27 x 14 Horizontal Engine.
28 x 10 Horizontal Engine.
28 x 10 Vertical Engine.
29 x 2 Vertical Engine.
20 x 1 Vertical Engine.

5 x 6 Vertical Engine,
4/9 x 5 Vertical Engine,
5 x 4 Ver ical Engine,
3 x 4 Ver ical Engine,
3 x 4 Ver ical Engine,
6 x 8 Te. Vertical Engine,
6 x 8 ft. Vertical Boiler, 88 a-inch tubes,
9 x 7 it. Vertical Boiler, submerged tubes.
Two 30 x 6 tv. Vertical Boilers,
2 x 0 ft. Vertical Boiler,
2 x 1 tv. Vertical Boiler,
2 x 5 tv. Vertical Boiler,
2 in. x 5 in. Vertical Boiler,
3 in. x 7 ft. roin, Horizontal Boiler,
30 in. x 7 ft. roin, Horizontal Boiler.

A large assortment of all styles of Boilers, Engines, Belt Jumps, Shafting, &c., &c. Write for prices and tell us what you want,

LOVEGROVE & CO., 152 N. Third St., Phila. Manufacturing Site for Sale,

OR LEASE FOR A LONG TERM. The late residence of the Hon. Wilson Mc-Candles, in the 18th Ward,

on 53d Street, Allegheny Valley Railroad and the Allegbeny River, running to low water mark and on the channel side, containing about a acres, almost square, is for sale.

Address

PITTSBURGH, PA.,

P. O. BOX 161. PITTSBURGH, PA.

For Sale.

Good as new, ready for delivery : Two 100 Horse-Power Forter-Allen Steam Engines. Two 100 Horse-Power Locomotive Boilers. Write for full particulars.

ROBT. WETHERILL & CO.,

Hardware Store for Sale. In a Manufacturing Town of 20,000 inhabitants.

a Hardware Store, established eight years and doing largest business in their line. Stock will Will sell all or half interest to inventory \$6000. right party. Address "D. O. C.,"

Office of The Iron Age, 83 Reade St., New York.

For Sale.

A clean stock of Builders', Shelf and Housekeeping Hardware and Cuttery in one of the larger cities o Ohio. Goods all new and well arranged, and i-cation of store could not be beaten for securing de-trable trade. A rare opportunity for any one desuing to engage in the Hardware Trade. Address "C. O. B.," Office of The Iron Age, 83 Reads St., New York.

FOR SALE. Extra Heavy

24-INCH LATHES

Strongly geared: also Heavy and Improved at inch Planers. Good workmanship and material. Price very low.

B. GRAVE LOUDEN,
22d st. and Washington ave.,
Philadelphia.

CORRESPONDENCE IS SOLICITED with parties having MACHINERY TO BUILD.

Heavy work preferred.

THE HARTFORD ENGINEERING CO.,

Metal Exchange Memberships

Bought and Sold by
WM. WILLIS MERRILL,
4 Stone Street, Room 69.

EXCHANGE MEMBERSHIPS.

E. BISSELL & CO. Wholesale Hardware Auctioneers.

83 Chambers and 65 Reade Sts., N. Y.

Sales held weekly for the trade. Consignments years. solicited. We refer to the leading manufacturers and importers.

LOCATION WANTED.

REMOVAL OF BUSINESS.

We are looking for the most desirable location for manufacture of Agricultural Implements and Michinery Specialties. Must have imequaled facilities for securing raw materials, Iron, Coal and Lumber cheap, and low freights, East, West and South, on manufactured goods.

Desirable propositions from individuals or business committees, giving all particulars, advantages and special inducements offered to secure a long-established, prosperous and growing manufactory will be considered.

Address, E. W. ROSS & CO., Fulton, N. Y.

Hardware.

An excellent opportunity to engage in the whole-sale trade for one who can command \$25,000, or would like to join hands with a good live concern in the south or Northwest, and put in as capitat the stock, which is in excellent condition and well assorted.

Special Notices.

NEW AND SECOND-HAND

MACHINERY.

I Engine Lathe, 20 in. swing, 12 ft. bed, screw-cutting. New. I Engine Lathe, 20 in. swing, 9 ft. bed, screw-cutting, eec.nd-hand. I Engine Lathe, 20 in. swing, 8 ft. bed, screw-cutting. New. Engine Lattic, School of the conting. New cutting. Nec cutting. Nec cutting. Nec cutting. Second hand. Courting. New cutting. New cutting ft. bed, screw-cutting. New cutting ft. bed, screw-cutting. New cutting ft. bed, screw-cutting. New cutting ft. bed, screw-

I Engine Lathe, 17 in. swing, 7 ft. bed, screwcutting. Now.
I Engine Lathe, 15 in. swing, 6 ft. bed, screwcutting. New.
I Engine Lathe, 13 in. swing, 5 ft. bed, screwcutting. New.
I Engine Lathe, 11 in. swing, 5 ft. bed, screwcutting. New.
I Hand Lathe, 11 in. swing, 5 ft. bed, with Counter
Shaft. New.
I Hand Lathe, 12 in. swing, 4 ft. bed, with Counter
Shaft. New.
I Hand Lathe, 10 in. swing, 3/4 ft. bed, with Counter
Shaft. Second-band.
I Hand Lathe, 10 in. swing, 3/4 ft. bed, with Counter
Shaft. Second-band.
I Hand Lathe, 10 in. swing, 3/4 ft. bed, with Counter
Shaft. New.
I Foot-fower Hand Lathe, 8/4 in. swing, 3 ft. bed.
New.
I Foot-fower Hand Lathe, 8/4 in. swing, 3 ft. bed.
New.
I Foot-fower Hand Lathe, 8/4 in. swing, 3 ft. bed.
New.

16 in, x i6 in, x 3.

Shaping Machine, 15 in, stroke, 33 in, traverse.

New.

Shaper, or Compound Planer, 10 in, stroke. Bed

So in, long. 2 tables. Second hand.

Shaping Machine, 10 in. stroke, 15 in. traverse.

New.

14-in. Upright Drill. B. G. & S. F. New.

14-in. Upright Drill. B. G. & S. F. New.

15 in. 16 in. Shaping Machine.

16 in. 17 in. 18 in. 18

tachment. New. feed, New.

Emery Grinder on Stand, with Counter Shaft.

New.
5 Enery Grinders for bench work. New.
9 Polishing Frames, for wood wheels. Second-hand.
1 Heavy Polishing Frame for wood wheels.
Second-hand. Second-hand.
22 Pair Polishing Stands for wood wheels. Second-

han,;
Steam Hammer, 3½ in. x 7 in. Cylinder. New.
3 Shafting Straighteners. New.
1 Power Punch to punch ½ hole in ½ in. iron. 13
in. from edge. New.
2 Bliss & Williams No. 31 Power Presses. Heavy. Second-hand, Bliss & Williams No. 1% Power Presses, Second-No. 18 Adjustable Inclined Power Press. New.

Portable Engine and Boiler, combined, 12 horse-power. Second-hand.
Locomotive Boiler, 12 horse-power. Good as new.

new.
t Cylinder Boller, 10 horse-power. Second-band.
t Vertical or Upright Boller, 10 horse-power. New.
1 No. o Cameron Steam Fump. Second-hand.
50 ft. 13 in, Smoke Stack. Second-hand. If the list does not contain what you

J. M. BADGER, 49 DEY STREET, New York City.

Correspondence Solicited

with manufacturers of first class Locks and General Hardware, for the sale of their goods in the principal Russian cities. by the subscriber, who has been in business in Moscow for a number of

A. VAN DER SEE, Rue Nikolskaia, Maison Tchigeff, Moscow, Rus

Wanted.

A Partner who can furnish from \$3000 to \$5000 for an interest in a well-established and well-paying Foundry in Dakota. which is new, running and doing a big business. The cost of fuel is very little above St. Paul rates, and Iron costs on an average 1½ cents per pound. The iron can be made into castings for 2 cents, including cost of iron, and will sell for from 2½ cents to 6 cents. Keason for wanting partner is that he business is more tran can be handled with the pre-ent capital. Address

10 July 18 Jul

Wanted.

HEAVY CASTINGS AND ROLLS.

Wented to buy Old Heavy Castings and Rolls of all kinds, Address

Special Notices.

New & Second-Hand Machinery.

| Engine Lathe, 10 in. x 3\(\) ft. |
| each, Engine Lathes, 11 in. x 4 and 5 ft. |
| each, Engine Lathes, 14 in. x 5 6 and 8 ft. |
| Engine Lathe, 18 in. x 6 5 1 and 8 ft. |
| Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 18 in. x 6 5 1 and 12 ft. |
| each, Engine Lathe, 19 in. x 6 ft. |
| each, Engine Lathe, 19 in. x 6 ft. |
| each, Engine Lathe, 19 in. x 6 ft. |
| each, Engine Lathe, 19 in. x 6 ft. |
| each, Turret Lathe, 19 and 14 in. x 4 and 6 ft. |
| fox Turret Lathe, 19 in. x 6 ft. |
| each, Turret Lathe, 19 in. x 6 ft. |
| each, Engine Lathe, 19 in. x 6 ft. |
| fox Lathe, 16 in. x 6 ft. |
| each, Engine Lathe, 18 in. x 18 in. x

SECOND-HAND.

Engine Lathe, 16 in. x 6 ft.
euch, Engine laihes, 18 in. x 6 and 8 ft.
laier, 2 x 2 x x and 6 ft.
2 x 2 x 8 ft.
3 x 6 x ie ft
50 in. x 50 in. x 17 ft.
10 in. Short.

" 50 in x 50 in. x 17 ft, 10-in. Shaper. 2-Spindle Edging Machine. Bolt Cutter, 10-iake sizes to 154 inch. Merriman. Lincoin Pattern No. 3 lillers. All kinds Machinists Tools and Supplies. THE TANITE C.J., GRANT & BOGERT MACHINE

TOOL WORKS, and for the NEW POLISHED SHAFTING.

For Sale.

H. PRENTISS & CO., 42 Dey St., N.Y.

The Industrial Works of Shamokin, owned and successfully carried on for a number of years by the late Wm. Brown, deceased, consisting of Foundry and Machine Shop, and a large stock of Patterns regarded as pare of the projecty. Boiler Shop, Black-mith Shep and Factory for the manufacture of heavy coal screens. Well located in the borough of Shamokin, Pa.. with the best facilities for shipping by rail, at d surrounded by a district contributing all the work that a shop of that kind can possibly turn out. Easy terms of payment are offered to soif a purchaser of limited capital For list of Tools and further particulars apply to WM. Moll. VAIN & SUNS.

Manufacturers of Boiler Plate and Tank Iron, Reading, Pa.

For Sale.

BRIDGE AND CAR MACHINERY. Three-in. Boit Cutter, 124-in. Double Head Automatic Boit Cutter, 3-in. Nut Tapper, 32-io. Drill Press, a Power Funches, i Power Shear. Rotary Planer, Cutting-off Machine, Donbie (hord Pin Lathe, is Forges, Fridge-Erecting Toobs, Anvils, Swedges, Tong, Button Sets. Hammers, cc.

For particulass.address

**S.M. YURK. Cleveland, Ohio, or call on J. L. DOLE. 180 Center St., New York.

Wanted:

OLD MALLEABLE SCRAP. State lowest price, point of delivery and quan-SITES & GILL.

Dealers in Scrap Iron. 222 and 224 So. Third Street, Philadelphia, Pa.

THE SALE OF Hardware Specialties or other Merchandise suited to New England market-to parties in good credit or for cash-will be attended to by the subscribers.

Send price list, with commissions allowed, to B. D. WASHBURN & CO. Box 3405, Boston P. O.,

Hardware Business for Sale, In one of the most thriving towns of Northern Michigan; two Railroads; good farming country.

Stock fresh and clean; will invoice about \$5000, Sausfactory reasons given for selling. Terms Faiisfactory reasonable, Address
"HARDWARE, 27,"
"HARDWARE, 27,"
"A New Y

Office of The Iron Age, 83 Reade St., New York. In a Wrench Circular

of 1882, we stated that an injunction for infringe ment of our patent had been obtained aga Mesars, A. G. Coes & Co.

This was an unintentional mistake, which we regret. A suit was then and still is pending.

For Sale.

Bacon Hoister, cable and appurtances com-plete; nearly new. New Bacon Hoister. New Improved Blake Crusher. New Iron Buckets. Address
THE WEED IRON & MINING CO., Weed Mines, New York,

Nos. 2, 3, 6 and 7 Sturtevant Blowers; Nos. 2, 4, 32, 33 * nd 39 do. £xbausters; No. 2 Root Blower and No. 1 Baker do. (positive pressure); Vertical Engines, 2 x 4 and 2½ x 5; Horisontal do., ½ x 2½, 3 x 6 and 8 x 9; ½ haners, 20 x 20 x 5, 30 x 20 x 6 and 30 x 30 x 8; Hoisting Engines, 9 x 12, and 6 x 12, with boiler. Have you any Blowers, Engl ea. Bollers and Machine Tools, &c., to sell or buy? Send exact description to C. R. & Higelow, M. E., 18 New Church Steet, New York City.

For Sale.

A Good Stove and House Furnishing Business in one of the most thriving cities on the Missouri River is For Sale Cheap, on account of illness of owner. Stock will invoice about (\$4000) four thousand dollars. Address J. H. MANNY.

No. 84 Lake Street, Chicago, Ill.

For Sale Cheap. Stationary Engine in complete order, 16 in. x 36 in.; Cylinder Fly Wheel, 16 ft. x 18 in. Call on or address 8. L. MURE & SO 3, Elizabethport, N. J.

THE ADVERTISER, having had many years' experience in the Hardware business, and capable of selling goods on the road, or buying, is one for an engagement by the tot of January. Parties wanting a competent man will address under Office of The Iron Age, by Reade St., New York.

An It the mai bodies oped. the Ore Clearfi-Coke from \$13 per propert and an Charcos selling.

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A Partn culars, i Burnt Ir

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Special Notices.

To Brass Foundries. To Brass Manufacturers.

For Sale or Lease.

A Large Two-Story Brick Factory,

formerly Macnine Works, at Pearl River, N. Y., on railroad depot, 25 miles from New York City, on railroad depot, 25 miles from New York City, Railroad facilities unexceptionable, on the line of the New Jersev and New York Railroad. The property contains 40.000 square feat floor space, with one 85 tl. P. Eigline and Boiler, 70 ft. 2-inch ine 8 siting and pulleys, main beits, steam heating and water pipes throughout the building. A splendid from foundry, 70 ft. by 30 ft., with one iron smelting outpola with Mack-nzie blower, brass furnace, core oven, blacksmith shop, pattern vauits, annealing oven, etc. The property can be bought or leased on liberal terms. For further particulars, price, terms, etc., address J. E. B. & Co.,

113 Liberty st., New York City, or Pearl River, Rockland Co., N. Y.

For Sale.

The largest stock of New and Second-hand Engines, Boilers, and general Machinery in the West. and for Catalogue. Hoisting Outfits for Coal Wining and other purposes a specialty,

WARREN SPRINGER. 195 to 219 South Canal St., Chicago.

For Sale.

Second-hand

DROPS and LIFTERS.

BEECHER & PECK, Lock Box 122, New Haven, Conn.

STEAM PUMPS

For Sale.

A large number of Steam Pumps of ali makes, and ranging in size from small tank or boiler feeds up to very heavy service mactimes. While the stock lasts good bergains are open for Miners, Water Works, toiling Mils, Furnaces, or any one needing to move fluids by steam.

Call upon or address.

Call upon or address
JNO. A. HINCKLEY,
Purchasing Agent of the United Pipe Lines,
Oil City, Pa.

For Sale.

MACHINES FOR MAKING PICKS, MATTOCKS AND AXES,

With Solid Punched or Adze Eyes.

T. & CO., Box 25. Office of The Iron Age, 83 Reade st., New York.

For Sale.

TREBLE AND DOUBLE-GEARED 25-INCH ENGINE LATHES,

from new patterns. GEORGE A. OHL & CO.,

East Newark, N. J. Valuable Iron Property for Sale.

An Iron Property in Central Pennsylvania on the main line of the Pennsylvania Railroad. Large bodies of Hematite and Fossil Ores, well developed. Modern appliances for the preparation of the Ores. Situated close to the coal seams of the Clearfield, Broad Top and Alieghany Mountains. Coke from Connellsvalle can be laid down at \$3.35 per ton. A ton of Pig Iron can be made for about \$13 per ton, exclusive of interest on plant. The property has one Charcoal Furnace and Forge, and an abundant supply of Timber for making Charcoal. Satisfactory reason can be given for selling. Apply, for further particulars, to WM. DORRIS, Huntingdon, Pa.

For Sale.

CAST IRON HOT-BLASE PIPES-THOMAS

3: Hot-Blast Oven Pipes for Thomas Oven, in rst-class order. Price, 1 cent per ib., cash, at ur works. Size, 13 ft. x 9 inches. A bargain. SHOENBERGER, SPEER & CO.. Pittsburgh, Pa.

For Sale.

An oli and well-established Piping and Plumb-An oil and worlessaous and riping and rinuage Bui-ines for sals in a thriving town in Eastern [assachusetts. A good trade established. with lenty of work on hand: emoloys 12 to 15 hands. In connection with above, a thorough and established team Heating Apparatus for which we have amplete set of Patterns. The town is at present utting in Water Works which will increase usiness. Addresss. Address

"P. O. BOX 42,"
North Attleboro, Mass.

Imported Gas Engine For Sale.

One 15 H. P. imported Otto Gas Engine, in perct order, and the finest flaished Gas Engine in country. Can be delivered at once. Inquire of

GILBERT LOOM CO., Worcester, Mass.

Wanted.

A Partner with \$5000 to \$10,000 in a Foundry and achine Business, established in 1824. For par culars, toquire of

L. H. COLLER. Poughkeepsie, N. Y.

Burnt Iron-Grate Bars, Cylinders, &c.

WANTED

buy Burnt Iron of all kinds, in any quantity. Address MATTHEW GILL, Jr., & CO.,

1'40 N. 9 St., Phila.

Location Wanted

Machine Shop and Foundry, where coal, wood iron can be obtained at lowest rates. Direct munication must be had East, South and st oy railroad. A never-failing water-power is terred. Proposals will be considered from mittees, owners or agents, giving terms and ditions of sale, &c. ddress. "ENTERPRISE."

Special Notices.

Assignee's Sale!

VALUABLE COKE WORKS.

The undersigned, assignee of Cassius C. Markie and Shepard B. Markie, Jr., will offer at public sale on the premises at the Bessemer Coke Works, in East Hun ingdon Township, Westmoreland County. Pennsylvania, on the 6th day of December, 1883, at 2 o'clock p. m. all the undivided two-thirds interest, late the property of the said Cassius C. Markie and 'sheard B. Markie of, in and to the following described lands and improvements:

Cassius C. Markie and "hepard B. Markie. of, in and to the following described lands and improvements:

All the undivided two-thirds of that certain tract of land situated in East Hundingdon Township, county and situated in East Hundingdon Township, county and situated last afore all, bounded and described as follows, viz.: Beginning at a white oak; thence by land of John F. sck south 13% east fifty-four and thirty-six hundredths (34 36 100) perches to center of road; thence by same and land of Peter Sherrick south 73% west seventy-six and ninely-two hundredths (163 24-100) perches to a stone; thence south 70% west seventy-sight and ninety-two hundredths (163 24-100) perches to a stone; thence south 85% west twenty-nine and eighly-four hundredths (38 42-100) perches to a stone; thence south 85% west thirty-sight and twenty-four hundredths (38 24-100) perches to a stone; thence by land of Daniel Felgar north 5% west one hundred and forty-one and fifty-two hundredths (141 52-100) perches to a stone; thence by land of J. Overholt south 35% east one hundred and forty-were and fifty-two hundredths (160 72-100) perches to the place of beginning, containing one hundred and seventy-two hundredths (50 72-100) perches to the place of beginning, containing one hundred and thirty-four acres(134) strict measure, excepting and reserving therefrom twenty excepts sold by M. McMasters to School District of East Huntingdon Township, by deed dated 22d May, 1861, and recorded in Westmoreland County aforesaid, in Deed Book, vol. 46, page 644, et seq.

Also, all the undivided two-thirds of the coal in and un-terlying all that certain tract of land situate in East Huntingdon Township, by deed dated 23d May, 1861, and recorded in Westmoreland County aforesaid, in Deed Book, vol. 46, page 644, et seq.

Also, all the undivided two-thirds of the coal in and un-terlying all that certain tract of land situate in East Huntingdon Township, by the land of the coal in and un-terlying all that certain tract of land situate in East Huntingdon To

and un-lerlying all that certain tract of land situate in East Huntingdon Township, County and St te last aforesaid, bounded and described as follows, viz.:

Beginning at a post on corner of land of Markle & Co. and A. O. Tintsman; thence by other land of which this was a part north 19° 47′ west one hundred and eighty and three-tentis (18° 2-15) perches to post on line of land of Henry Durstine; thence by the same north 50½° east twenty-three (23) perches to post on line of land of Henry Durstine; class sixty (60) perches to post; the tee by same north 48° east sixty (60) perches to post; the tee by same north 31° 13′ east sixty-four (64) perches to post on lands of C. P. Markle & Sons; thence by same south 19° 43′ west one hundred and three-tenths (100 3-10) perches to post; thence by same south 30° 44′ east forty-three and two-tenths (42° 2-10) to post; thence by same south 30° 50′ east one hundred and forty and e ght-tenths (140 3-10) perches to post on line of land of Markle & Co. aforesaid, and then 20 by the same south 82° 34′ west thirty nine and four-tenths (30 4 to) perches to the piace of beginning, containing eighty-three and seven-hundredths (83 7-100) acres. Excepting and reserving two acres and fifty-nine perches under buildings described as follows; Heginning at a point 11.7 feet from southwest corner of Daniel Felgar's mill; thence south 34° 13′ east 261.4 feet; north 31° 31′ east 38.65 feet; north 32° 44′ west 34 feet; south 45° 13′ wost 313.65 feet, and thence outh 36° 55′ east 30.5, feet to the place of beginning. Together with the right and privileges on the surface or under 1. If necessary, to the removal of the coal, without liability for damage to the surface by reason f sinking or falling in, and without liability for damage for the destruction or diversion of the water flow; also with the right to keep and maintain roads and ways in and through said mines forever, for the transportation of diversion of the water flow; also with the right to keep and maintain roads and ways in and throug

Toke Works," lately operated by C. P. Markle, & Sons.

The other undivided one-third interest in the same, late the property of Cyrus P. Markle, deceased, will be sold at the same time and place and uon the same terms as to time of payment, by Shepard B. Markle, Jr., executor.

The improvements, which will be sold with said land as a part thereof, consist of 170 coke ovens, 71 miners' houses, five shanties, one brick two-story farm house, one two-story farm store house, one mule stable, 120 X 35 feet, one pump house and Eclipse Pump, one 22-horse-power Carlin's engine, 65 pit wagons, and all raliway tracks and sidings constructed within the boundaries mentioned.

in's engine. 5; pit wagons, and all railway tracks and sidings constructed within the boundaries mentioned.

The quantity of coal remaining unmined, estimated u on the basis of a survey made in May, 1880, is about one hundred and seventy five acres. This survey and a plan of the works out he seen at the office of Messrs. Knox & Reed. attorneys, 54 Grant street, Pittsburgh. Anther survey is being made which will be exhibited at the sale, showing the present quantity of coal, which can also be seen at the offices of Knox & Reed at any time within ten days prior to the sale. The property will be sold as containing the number of acree of coal shown by the last named survey, more or less. These works have the reputation of being one of the best to the coke region on account of their economical working, and are in good condition, having been operated to the present time.

At the same time and place, the undersigned, as assignee of C. P. Markie & Sons, will sell the following personal property: 13 mules, 4 horses harness for 13 mules and s horses, one two-horse wagon, one two-horse spiring have carts, one plow, two harrows, ten tons of hay, more or less, three barrels of pit oil, tooc feet white-oak lumber. 6000 slats, more or less.

The terms of the sale of the real estate to be 5 per cent. of the purchase money to be paid in two equal annual payments, with interest thereon from delivery of de-ed, and to be secured by bond and mortage upon the premises sold. The property will be sold free of encumbrance.

JES-E H. LIPPINCOTT.
Assignee.

KNOX & REED, Attorbeys.

For Sale Cheap,

TO CLOSE AN ESTATE,

ONE 10 X 20 VERTICAL ENGINE, in good order. Dismeter, 12 ft, long, with 48 216-in. Tubes, full front, and all complete.

ONE 4% BAKER BLOWER. ONE No. 5 ACME STEAM PUMP.

All the above are in A No. 1 order, and ready to go to work, and will be sold at about onehalf what they cost a short time ago.

For prices and other information, apply to

JOSEPH LUMLEY. 144 North Third Street, Philadelphia.

Planer For Sale.

New Iron Planer, planes 6 feet x 24 x 24 inches, made by W HITCOMB MFG. CO; no finer tool in the market. Also Stapers, Dulli Presses, Lathes. Screw Presses. Punches and Shears; all sizes, large and small, at lowest prices. Immediate delivery.

PEERLESS PUNCH AND SHEAR CO., 38 Dey & Street, New York.

Trade Report.

BRITISH IRON AND METAL MARKETS.

[Special Cable Dispatch to The Iron Age.] LONDON, WEDNESDAY, NOV 14, 1888.

Scotch Pig.-The market is a little quote Makers brands:

oltness, alongside, Glasgow Glengarnock, "Ardrossan. Eglinton, Dalmellington, "Shotts. "at Leith... Lighterage from Ardrossan to Glasgow is 1/ ?

Cleveland Pig.-The market is weaker and quotations are lower. We quote as follows, f.o.b. shipping ports :

Middlesboro' No. 1 Foundry......

Bessemer Pig.-The market is unchanged. W. C. Hematites are quoted 47/ @ 48/6 for Nos. 1, 2 and 3, equal parts, .o.b. shipping ports.

Blooms. - But little doing.

Manufactured Iron-Is quiet and unchanged. We quote at works:

r	and a decrease of							
ì		£	8.	d	. £		s.	d.
	Staff. Ord. Marked Bars	7	10	0	@			
,	" Medium "	6	5		0	6	15	(
l	" Common "	6	0	0	00	6	5	(
9	Hoops, 20 W. G. and over.				-			
ı	" Common Best	7	0	0	@	7	5	0
	" Medium	6	.5	0	@	6	15	0
	" Common	6	10	0	@			
١	Sheets, 20 W. G. and under.				4.0			
1	" Ordinary Best	8	15	0	@	9	5	0
	" Common	89	0	0	a.	8	- 5	0
	Welsh Bars	5	5	0	a.	5	7	6

Steel Rails-Are irregular. We quote £4. 15/ @ £5. 10/ for Ordinary Sections, f.o.b. shipping ports.

Iron Rails .- But little doing.

Old Rails.—The market is a little steadier. We quote Old Tees £3. 12/6 @ £3. 15/, and Old D. H.'s, £3. 15/@ £3. 17/6, c.i.f. New York

Scrap.-The market continues quiet. We uote Heavy Wrought, £3. 2/6, c.i.f. New York. Bessemer Crop Ends, run of the mill, are quoted 60/, f.o.b. shipping ports.

Copper.-The market is weaker and prices are reduced. We quote Best Selected, £66 @ £67, and Chili Bars, £59. 10/ @ £60. 5/.

Tin-Is weaker and lower. We quote Straits, Ingot, spot, £87. 10/ @ £88. 10/, and futures, £87. 15/@ £88. 10/.

Tin Plates.-The market is quiet, and prices without change. We quote :

Spelter.-The market is firmer. We uote Ordinary, at shipping ports, £15. 10/

Lead .- Prices are steady. Common Engish Pig is quoted £12 @ £12. 2/6.

@ £15. 12/6.

Freights .- Steam from Glasgow to New York, 4/6 @ 5/; Liverpool to New York, 4/6 for the same week last year. Petroleum is @ 5/; Liverpool to Philadelphia, 5/@ 6/6. and London to New York, 7/6 @ 9/6.

TRADE AND FINANCE.

Office of The Iron Age, WEDNESDAY EVENING, Nov. 14, 1983.

The week just closed has been a good one for the bulls in nearly all speculative circles, but in legitimate trade, apart from those specialties in demand for the holidays, the current of business has been rather sluggish. The active season which some had hoped for seems to have been indefinitely postponed, perhaps as a result of numerous mercantile failures, stock-market disturbances, and more especially, feverishness in the markets for grain and provisions under speculative manipulation. Certain it is that the general merchandise movement, both East and West, is below ordinary proportions. Advices from the 25 leading clearing houses in the United States give the aggregate clearances for the week as \$893,301,575, against \$1,107,270,793 the previous week, and \$1,179,300,655 the week before. Compared with the corresponding week last year, the clearings show a decrease of 27.7 %, against a decrease of 15 % the previous week.

Manufacturing in nearly all directions is dull. Within the last few days there has that there has been a decrease during the been a decidedly more buoyant feeling on the past fiscal year from the figures for the pre-ONE HORIZONTAL TUBULAR BOILER, 54 in. Produce Exchange, wheat options showing an advancing tendency, while corn and breadstuffs were stronger, in sympathy with the movement in wheat, and petroleum ad- \$958,932; and an increase in the receipts vanced sharply to \$1.15% per barrel for crude, which is the highest price reached since the boom of last summer. A stronger year was \$398,287,581, which is \$5,237,668 market is encouraged by the sudden advent less than the amount received last year. The of cold weather, admonishing shippers that net expenditures amount to \$265,408,137, an the close of navigation is at hand. Grain shipments by lake will be practically at an end for the season after this week. The ex- crease in receipts make a reduction in the port movement, too, has received a new impulse, the clearances of wheat of last week duction of the public debt of \$12,664,366. The footing up 600,000 bushels. The shipments expenditures on account of interest on the east from Chicago last week by rail were very large, aggregating 50,000 tons, of the same purpose during the preceeding which 31,280 were grain and 12,000 pro- year. visions.

quirements, against a deficiency of \$3,000,-000 one year ago. Their loans are only \$6,490,700 greater than at this time last year, while they hold \$11,612,600 more cash than then. The deposits show an increase of \$27,337,500. Money continues easy on call. We note to-day a reduction of ½ of 1 % in the general rate for mercantile discounts to 5 %, and 6 % for 60 day and 4 months' paper respectively for first-class weaker. Warrants are quoted 44/6. We double names, and to 6 % and 61/2 % respectively for first-class single-name paper. Higher rates than these are only charged on paper not considered first-class.

The railroad situation was improved by the settlement of the Trunk Line difficulties, advantage being taken of the approaching close of navigation to advance freights 50 per 100 pounds from Chicago to New York, the increase to take effect 26th instant. The result of the election was generally construed as affording hope of stability in future mercantile calculations.

Foreign Exchange is dull. The posted rates are \$4.82½ @ \$4.85; commercial bills, \$4.80 @ \$4.80½. The improved export movement, particularly as to breadstuffs, grain and cotton, is not calculated to stimulate gold imports.

On the Stock Exchange during the week under review the market was generally strong until to-day, when a bear raid caused a general decline of 1/2 @ 1 1/8, prices closing weak. On Thursday, Friday and Saturday there was a gradual improvement, based on a settlement of railroad difficulties, good prospects for winter transportation, and some other favoring circumstances. There was also a large business in railroad mortgages, indicating liberal purchases for investment. The Vanderbilts were especially strong, and Canada Pacific advanced on favorable reports respecting the 3 % dividends guaranteed by the Dominion Government. To-day the latter were contradicted, and it was denied that the Oregon and Transcontinental Company intended to present a financial statement. On the strength of these rumors a bear attack was organized, and after violent fluctuations the market closed weak and lower, Michigan Cental declining to 93; Union Pacific to 87%, Wabash common to 211/2, Canadian Pacific to 61 3/8, Northwestern to 126 1/8, Missouri Pacific to 97, Lackawanna to 117%, Wabash preferred to 33%, and other stocks 1/8 @ 3/8. In the final dealings there was a slight recovery.

The imports of merchandise at this port last week were moderate, the total being \$8,496,526, of which \$6,791,022 represents general merchandise and the remainder (\$1,705,504) dry goods. Since January 1, the imports aggregate \$398,838,690, compared with \$435,528,963 for the corresponding period of 1882. The importations of specie and bullion at this port during the week were \$1,819,296, consisting of \$1,690,-161 in gold, and \$129,135 in silver, as against a total of \$229,538 for the week end ing November 10 last year. The importations since the 1st of January amount to \$17,476,545, against \$5,013,422 for the corresponding period in 1882. The export movement of domestic produce from the port during the past week was of fair proportions. the total being \$7,045,643, against \$6,958,823 moving out to a fair extent, but the exports of breadstuffs are quite moderate, and there is about the usual movement of provisions and cotton. Since January I the exports aggregate \$308,296,189, compared with \$297,190,382 for the corresponding period of

United States bonds closed t lows:	o-day	as fol-
	Bid.	Asked.
U. S. 4168, 1891, registered	11896	11876
U. S. 4168, 1891, coupon	11434	115
U. S. 4s, 1907, registered	1231/4	12236
U. S. 4s, 1907, coupon	1231/8	12236
U. S. 3 per cents	10013	400
U. S. Currency 6s, 1965	1803%	reser.
U. S. Currency Cs. 1896	182	-
U. S. Currency 6s, 1807	134	-
U. S. Currency 6s, 1893	18614	
U. S. Currency 6s, 1899	18716	

Secretary Folger one day this week visited the Sub-Treasury in this city, where views were exchanged with a number of prominent bankers, but he had little to say in relation to financial questions, preferring not to anticipate the recommendations of his report, soon to be made public. Comptroller Knox has appointed Augustus M. Scriba National Bank Examiner for the city of New York, to succeed Charles A. Meigs, recently deceased.

The annual report of the United States Treasurer was completed yesterday, showing ceding year in the receipts from customs of \$5.701.233 : from internal revenue of \$1. 777,226; and from miscellaneous sources of from the sales of public lands of \$3,202,724. The total net revenue received during the increase over those of 1882 of \$7,426,697; and this increase added to the amount of the deamount of surplus revenue applicable to the republic debt fall \$11,917,075 below those for

sirable styles, larger lines and prompt shipments to offset the comparatively small
freight charges; but where the material is

118,547, which is larger than for any pretions.

12,000 proments to offset the comparatively small
freight charges; but where the material is
river October within the last to years with able, showing a gain of \$1,053,300 in the vious October within the last to years with the great item, and the labor comparatively

surplus reserve, so that the banks now hold a single exception. Since January 1 the an excess of near \$2,000,000 above legal re- total is \$392,876,435, which is \$30,000,000 less than the imports for the corresponding period last year. Turning now to the exports, the total for October is \$30,745,296, showing a gain of about \$1,000,000 on the corresponding data of last year, which is considered quite favorable, in view of the limited shipments of produce. Since January 1 the total is \$310,321,398, against \$327,-271,259 for the corresponding period in 1882. For the nine months ending September 30 the United States have exported \$590,732,-991 to foreign ports, and imported \$541,029,-859, leaving a balance of trade in favor of this country of \$49,703,132 for this portion of the year, which is not likely to be increased by the October totals from the country at large.

In general business trade is light in nearly all departments, aside from preparations for the annual holidays. In dry-goods circles, while there is little complaint touching the volume of business done, there is more or less dissatisfaction with the expense attending it, and also of the continued excessive production. Buyers make purchases with unusual caution.

GENERAL HARDWARE.

The market preserves the same genera features as for some time. There are minor changes in price which are recorded below. The demand continues fair for the season. and in winter and holiday goods there is the usual movement. Retail trade is reported good in most sections and the business conditions healthful. Whatever there has been of inactivity the past month has been due in large measure to a lack of confidence in the stability of prices, the gradual decline in many lines of goods being the chief factor in the repression of orders. While this condition is unsatisfactory, it is not ominous. and the future outlook is regarded hopefully by many wise and experienced Hardware

The attention of the trade is called in the following columns to several matters of general interest and to some Hardware details of more or less importance.

We are again called upon to record the death of one well known in Hardware circles. On Sunday last Orson W. Stow, vicepresident of the Peck, Stow & Wilcox Company, died very suddenly at his residence in Plantsville, Conn., at the age of about 60 years. Not only was he one of the leading manufacturers of the country, with whose name our readers have long been familiar, but he was also an educated mechanic of ex ceptional ability and rank. More than fifty patents were granted him for his own inventions, many of which were of great value to the company of which he was an important member. Mr. Stow was a graduate of Yale College, and in the midst of his many engagements found a place for literary pursuits and social and public duties. He had served with ability in the State Legislature, and last year received the nomination for Senator, which he declined. He was connected with many religious and philanthropic movements, and those who knew him bear testimony to the consistency and usefulness of his life.

The communication which appeared in these columns last week has awakened a very general interest among manufacturers and the large trade. Conjecture has been aroused as to the authorship of the communication and the interest represented. We can only say that the author is not a manufacturer nor an Eastern merchant, but a very prominent Western jobber, whose views upon any matter connected with the Hardware trade are entitled to great respect. The whole subject he discusses is recognized as a matter of serious practical importance, perplexing alike to manufacturers and jobbers. The extent to which the practice of paying freight to Wes ern markets has been carried varies materially with different kinds of goods-the general tendency being to place these additional charges on the heaviest and bulkiest goods, which are always the first to be manufactured in a new and developing country. But these are the goods on which the freight is a very considerable item, and which, from their narrow profits, can often ill afford to bear it. The custom is, however, too frequently extended to other classes of goods-so much so as to be a disturbing element in a weak market. As bearing on the whole question, and giving the basis from the standpoint of a prominent manufacturer. the following letter will be read with in-

To the Editor of The Iron Age: The letter "Jobber" in your issue of the 8th seems to us more replete with complaint than suggestion. From the standpoint of a large manufacturer whose interests are very seriously affected by the matter, and who thus far has been able to confine delivery to New York City, the article was carefully searched for a remedy of the evil. There is no remedy excepting the exercise of common business sense. With all due respect to the Western manufacturers, whose enterprise and rapid growth are the admiration of their Eastern competitors, they are yet far behind their Eastern brethren in the line of goods where labor is the largest item, and "Jobber" will find that all level-headed manufacturers of this class of goods are de-livering their goods in New York only, and allowing the transportation to form, as it should, a portion of the cost to the Western jebber, whether he be in Pittsburgh or Den ver, relying upon superior quality, more dea trifle, then the Eastern manufacturer must equalize his freights with his Western competitor or close his works. There is no "mania" about this. It is a natural law that no skill or "combinations" can wipe Its effect is many times modified or hidden by an agreement of manufacturers which apportions the trade, but all this class of arrangements quickly give way when trade is stagnant.

From a thorough personal acquaintance with nearly every prominent Hardware manufacturer in the country, the writer believes that no class of trade has fought against this free delivery to the very last possible moment more energetically than that class of merchants of whom he is one. AN EASTERN MANUFACTURER.

The following letter, which we have received from another manufacturer in a different line of goods, we are glad to lay before our readers with the sanction of the writer's signature, which will give weight to the views expressed, as those of an experienced and wise observer of the course of

74 CHAMBERS STREET, NEW YORK, November 13, 1883.

November 18, 1883. {
To the Editor of The Iron Age: I carefully ad "Jobber's" communication in the last read "Jobber's" communication in the last Iron Age, and was surprised to learn of this prevailing custom of paying Western freights. Millers Falls Company for the last 20 years have been in correspondence with most of the Western Hardware jobbers, but in all that time very few of them have spoken of freights, and none of them have insisted upon their being paid by us. So far as I am aware, our's has not been a singular experience. The New York trade is still of great value, and we cannot afford to give dealers here a reasonable cause of complaint by putting it in the power of others to un-dersell them in their customary markets. No system of freight payments by manufacturers can be arranged on an equitable basis, owing to the varying distances and changeable rates. On many articles freight charges to the far West are more than the cost of the goods in New York.
On the other hand, manufacturers may

locate in some ob-cure place in the East, be-yond the reach of competing lines, in which event they must pay freight to some central point like New York, before their goods can take a market value, and hence began the custom under consideration. In competition with New York, it is better for Western jobbers to have their freights paid, but in competition with each other it makes no difference, provided, all are on the same fortsettled, the result must be as broad as it is long for all concerned. If manufacturers pay freights, they must add the aggregate amounts to the price of goods. Of course, a crop of manufacturers will ripen each year whose needs will compel them to realize on their goods, regardless of cost or profits. Such men will pay transportation or make discounts which solvent firms cannot afford and do not need to meet, as a losing businees will shortly take itself out of the way. I fear that "Jobber" will be hurt by his own boomerang, as many Western jobbers will hear of the extent of this matter for the first time from him, and imagine that they have been left. Truly yours, H. L. PRATT,

President Millers Falls Company That the custom of delivering goods West on the part of manufacturers and jobbers has grown to considerable proportions is evident from the communications which we have received from numerous parties. A large and well-known manufacturing house in Western New York refer to the subject as being a very broad one, and from their standpoint speak of it as very burdensome so much so that they would be very glad to find some practical plan for dispensing with it entirely. In the same spirit a manufacturing concern in Ohio speak of having fought for years against making Jeliveries at any point excepting place of manufacture. They have found it, however, impossible to stem the tide, and would be very glad to return to their former manner of doing business; but they frankly confess that they do not see any way to correct the practice and are unable at present to make any suggestion regarding it. In the same spirit but more crisply, a manufacturing company in Pennsylvania say: "We dislike the whole business and have been forced into it by Eastern manufacturers." A manufacturer in an Eastern State writes to this effect "We have carefully read the article in The Iron Age signed 'Jobber,' and with him cannot see the common sense of Eastern manufacturers who, having no Western compe tition, pay freight to Western points; but, an article is made in both the East and West, it may be desirable to equalize matters by having a few prominent points for common delivery." A Western manufacturer expresses views in which most of our correspondents agree, as to the impor tance and difficulty of this subject. speaks of the question as being very broad and difficult of solution, remarking bluntly that the practice and question have been cussed and discussed without much success. From the tenor of the communications that we have received and the interest which has been awakened in the matter, it is evident that this practice is recognized as a growing evil, and it is to be hoped some way may be found out of the mischief and inconvenience which it occasions.

The following letter from a widely-known house is of interest, as showing the manner in which they were led into the payment of Western freight, and the way they freed themselves from the inconvenient and burdensome practice. It would be the part of wisdom for other manufacturers to adopt the same course and deliver goods f.o b.:

WOONSOCKET, R. I., Nov. 18, 1828. To the Editor of the Iron Age: Several years ago, following the lead of others, we were led into delivering goods to some of the of the country, many mills have added to to days, less 2 per cent for cash in 10 days, Harpoon Horse Fork, the Milwaukee Re- they have fallen into comparative disuse.

as the Mississippi River. But it did not end there, as retailers in some small places would send an order for, say, five dozen Wringers, and claim delivery. We would receive orders in that way, and other parties in making settlements would take off freight, claiming that other Wringer manufacturers were quoting them the price, delivered, and the result was that our entire business was getting to be one of delivery to every point we shipped to, large and small. Late because of delivery to the Mississippi River, which included St. Louis and St. Paul, job bers on the Missouri River claimed delivery there, and then parties in the intervening points between the Mississippi and Missouri rivers, also claimed delivery. Finally, early this fall an old customer of ours in Denver offered us a large order if delivered to that point, and claimed that other manufacturers were offering him their goods at the price, delivered all the way to Denver.

Owing to the extremely low price to which Wringers had gone this season, we already, for self-protection, to some of the extreme points had been obliged to charge a higher price for the goods, because of the high reight to these places, as it was a fact that, then we figured the freight to some points where a party would want five or ten dozen Wringers shipped, there would be local charges from some of the large terminal points, and the freights would be so high as to leave us no profit whatever on the goods. In the case of Denver, when that came up, we found that there would be an actual loss to us, so we declined the offer, and the party did not purchase from us. Their claim, that if goods were delivered to Omaha they should also be delivered to Denver, may be just from their standpoint, but the fact is that on Clothes Wringers, if the same prices, delivered, were charged a jobber in Denver, we would actually receive \$6 per dozen less net at our factory than from a jobber here or from a job ber in San Francisco to whom goods are sold f.o.b. here, or in the case of delivery to Omaha, \$3 per dozen less for the goods. We, therefore, on the 1st of October, decided to withdraw all delivery, and sell our goods f.o.b. at our factory only and put every one on a par, of which pur-pose we advised our trade as per inclosed circular, and having made a lower price f.o.b. here than we formerly made delivered, it has given general satisfaction.

Respectfully yours,
BAILEY WRINGING MACHINE COMPANY,
GEORGE REUTER, JR., General Agent.

We observe that in their circular, Oct. 1, 1883, they advert to the matter in this form Special attention is called to the fact that we now deliver at factory only. We have lately been asked to deliver at points as far West as Denver, and have been obliged to decline orders from there, because deducting the freight to that point would have made an actual loss to us at the low price at which our goods are now sold, and they would have netted us less than our largest customers are paying us. We have concluded, therefore, that the only just way for our customers, and the only safe way for us, is to sell our goods f.o.b. to every one." Nearly all that we have given to-day is from the standpoint of the manufacturer. We should be glad to lear from merchants on this question.

The Nail trade has been quite active, the demand holding up with surprising strength for the season. There has been, however, a disposition to sell at lower prices, notwithstanding the fact that stocks in the East are very light, and that a full assortment of Nails cannot yet be had in any quantity. This may partly be from sympathy with the general Iron market, but it is doubtless also owing to the efforts which have recently been made by Western manufacturers to sell a portion of their product in this market. Dealers continue to quote \$2.90 for retail lots, and \$2.85 for lots of 100 kegs or over, but we hear of sales having been made at much lower prices. In view of the fact that the Western Nail Association have concluded to stop all Nail machines in the West from December 20 to February 4, it is very likely

There is no doubt that the branch of the Iron trade which has suffered the least from the decline of prices of the last few months state of affairs there may be a number of the course that has been pursued by the Western Nail Association in restricting pro duction, in which attempt they were aided greatly by the strike of 1882. At the commencement of the decline in prices early in 1880, this policy of restricting production by the stoppage of Nail factories was begun, the first stoppage being in March of that year. At irregular intervals, as the condition of the market seemed to demand, other stoppages have been ordered and carried out. This has had a twofold effect; first, in keeping the stock of Nails low; and, second, in giving buyers to understand that the manufacturers proposed to keep control of the market. The effect of these stoppages on prices has been very decided. The decline from \$5.25 per keg, the highest point reached, has been very gradual. When \$3.50 was reached, the strike came to assistance of the mills, and for months the price remained at this figure, while the prices of other forms of Iron were dropping lower and lower capacity for production began to be largely increased by the building of new Nail machines. Some of this increase was no doubt and 5 per cent. discount to small trade; 40 due to the policy of stoppage, but by no and 10 per cent. on orders for 25 dozen

leading jobbing points, which afterward their capacity because of a well-grounded bewere increased to other jobbing points as far lief that in a close market a small Nail factory could not produce as cheaply as a large keep up the assortment as well as a large number

Another element that has led to the increase in machines, especially in old factories, has been the change from iron to A small factory could not consume steel. the product of even a 4-ton Bessemer converter, which is the size that three Steel Nail factories are building. Notwithstanding the varied influences which operated to strengthen the Nail market, the same causes that have forced down the prices of other Iron products have at last been potent in the Nail trade, and Nails are gradually falling. The increased capacity is putting more Nails on the markets of the West, and the stoppage of the machines west of the mountains is not of itself sufficient to secure the best results. The West deem it necessary that the Eastern mills should stop also. During all of these stoppages by the Western Nail Association, and during the four months' strike, the Eastern mills ran on, and have reaped whatever benefit there was makers. It is perhaps to be said that the in these stoppages, without having to orders booked at the present time are not, in submit to any of the accompanying dis- all cases, as large as those received by this have recently asked the East to join with makers that the trade has thus far been them in a stoppage, but did not meet with even better than that of the past season, and much encouragement. This seems to have one maker mentions to us that early in Octo had its effect upon the market, as it appar- ber three-fourths of his whole product was ently indicated that the day of stoppages already sold, There seems, however, to be now been put on the situation by the action of the Western Nail Association in determining to stop. As the Eastern Association which will be decided within a few weeks. have intimated that they might stop in Jan- The general impression, however, preuary, but that in any event they would not vails that these combination rates will be send Nails west of the mountains during the Western stoppage, it now looks as though the two sections might work in accord and to mutual advantage in preventing a disastrous break in prices. We learn that Nails into another season; consequently it may be are much lower in price to-day than this day last month; \$2.65 is the quotation of Western jobbers, which would indicate \$2.55 in carload lots. A month ago they were selling at \$2.70 to \$2.80. The Eastern prices would inevitably come down in sympathy with Western prices, as the only difference there can be between prices of Nails East and West is the freight, which is, say, 20 cents a keg. Whether Nails will go lower than this for the present will depend somewhat upon the action of the two Nail associations. Should they both conclude to stop production for a time, this would start the spring trade with a light stock of Nails. The present price would undoubtedly be maintaiged for a while, at least until the new mills building found it necessary to seek trade. To get this they must buy it, and it can hardly be supposed that old mills will allow their trade to be taken without an effort to keep it. Altogether, the outlook in the Nail trade for prices next year is not a brilliant one, unless a "boom," of which there are now no

indications, sets in. The demand for Barb Wire continues very good. Some mills are now running double turn, which is quite an advance on "overtime" The meeting of Barb Wire manufacturers, which was held last week at Chi cago, appointed a committee to communicate with the manufacturers who were not represented there, with the view of effecting a combination to regulate prices. The meeting did not decide to pay 30 cents per cwt. royalty to the owners of the Barb Wire patents, but did decide to endeavor to have the royalty reduced from its present figure. which is 75 cents. Some of the manufacturers assert that they will not pay any royalty. It is announced by telegram from Joliet, Ill., that all the Barb Wire makers of tice of selling at 60 days, with 2 per cent. off that place intend shortly to remove their for cash, and not allowing bills to run to that the declining tendency will be checked, if actories to Missouri and other points within if, indeed, prices are not slightly advanced. If actories to Missouri and other points within the jurisdiction of Judge Treat, whose reunlikely that Hoes and Malleable-Iron Rakes Hunter, president and treasurer and G. W. cent decision in St. Louis, declaring the Washburn patents invalid, protects all the prices than if Forks were not controlled by manufacturers there from interference and a combination; but there is something like has been the manufacture of Nails. For this the payment of a royalty. Prices in this an agreement among Hoe and Fork makers section are firmly held at 714 cents per reasons, but the chief one is without question pound for ordinary lots, and 6 cents per pound for large quantities.

At this time a good deal of interest centers prices are made and orders booked for the coming year, and we are glad to report a

healthier condition of things and better prices than a year ago. Last season, both Steel and Wood Goods were sold in the open market, every manufacturer for himself and at very low prices. While the trade was unsatisfactory to the manufacturers two important points were, however, gained. First. the experience of the year before had cured several makers of the demoralizing practice of guaranteeing prices, and most of the standard manufacturers finally had a price of their own, Second, several leading makers abandoned the former custom of profit. selling on long time, bil's being payable in August or September, and made their terms 60 days, with 2 per cent discount for cash within 10 days. association makers at these prices: 40 season.

allowed to the principal jobbing cities north one, nor could a small number of machines of the Ohio River. On Forks, Cast Steel Goods, there are combination prices of 50 at \$20. per cent. discount to ordinary buyers, with an added to per cent, for orders for too dozen Forks or more. Terms similar to those we have above mentioned for Wood Goods. These prices are an advance of from 20 to 25 should be more uniformity in the matter of per cent. on former prices, but are fixed at a point fairly remunerative to the manufacturers, and satisfactory, we believe, to the buying trade in general. As far as we can learn, these prices are strictly adhered to, and we hear of no complaints of manufac-

turers deviating from them in the least. The outlook for the coming year is usually regarded as very favorable. Steps for the concerted action which we have mentioned were taken early. No contracts of goods that we hear of were accepted before its adoption-except in the case of Hoes, which are outside the combination, and of which we speak below. Stocks carried over were light in the hands of most dealers and advantages. It is understood that the West time last year, but we learn from several was over, and that unrestricted competition a disposition on the part of buyers to was at hand. A new phase has, however, withhold their orders until they see whether or not these rates are to be adhered to for the coming season, a question maintained. On account of the possibility of a decline of the prices at the end of this season, it seems to be the purpose of most jobbers not to buy goods to carry anticipated that the early orders will generally be smaller than they have heretofore been, with the exception of sorting up fre quently after the spring trade sets in. It may be questioned whether the manufacturers will be able to fill promptly so many small orders as are likely then to be offered, in which case the Union may see fit to advance prices still further. As far as we can learn, the Northwest is practically bare of both Steel and Wood goods. Change from the long time formerly given to 60 days time ruling during the past year, combined with the fact that buyers generally have been conservative in their purchases, has made the stock which they have carried over very light. Hence, it is anticipated that the demands for small tools will be fully equal to the supply. The experience of the trade has shown that hard times, or dull times, generally curtail the sales of costly tools like Reapers, Mowers, Threshers, &c., but more, rather than less, hand-farming tools are then sold, as they are cheap and a

few dollars will buy a good many of them. Hoes and Malleable Garden Rakes, which are also classed as Steel Goods, are not controlled by association prices, and, with an overproduction, have been selling at very low figures-in many cases at a loss to the makers: 60 per cent, may be mentioned as a regular price on these goods, 60 and 10 being given to large buyers. This condition of things has not materially changed. Prices still rule very low, and a good many large orders have been booked, and some of the prominent manufacturers mention that up to the present time the demand has been nearly as large as at this time in former years. In this line, as in the case of Forks, manufacturers are very generally adopting the prac will be sold in connection with Forks at lower with reference to the limit of discount on Hoes to the jobbing trade. While Hoes and Malleable-Iron Rakes, not being controlled by the combination, may affect the prices at in the market for Agricultural Tools, as which jobbers will sell Steel Goods generally, yet, so far as the combination is concerned, it s probably stronger as it is than it would be had an attempt been made to include these goods in it with important makers outside, and one heavy sale, at least, made to a very large jobber.

It is, we think, a matter of congratulation that the combination on Wood and Steel goods is so firmly adhered to. The prices which are determined upon are remunerative to the manufacturers and yet are yielding only a fair profit. It is not to the interest of merchants, manufacturers or consumers to have goods sold below a living

The trade in the larger Agricultural Imple nents was only fair the past season, the light crops in some States limiting the sale. In accordance with the But few goods are, however, carried over, agreements which were made this fall, of and the outlook is regarded as promising. which our readers have already been in- it is still too early for trade in this line of each day. In the meantime, however, the formed, Snathes and Grain Cradles, com- goods to open, but the prospects are that monly termed Wood Goods, are held by the prices will remain about the same as last the special notice which our readers will find

The Milwaukee Hay Tool Company, Mil- house of Henry Brooks & Co., 115 Milk waukee, Wis., have recently appointed street, Boston, are offering a large stock of means as large a part of it as is generally Snathes or 10 dozen Cradles; 40, 10 and 5 F. Porter Thayer, 79 and 31 Reade street, Forbes' patent Acme Skates at special fig. supposed. Apart from the increase due to the per cent. discount on orders for 100 dozen New York, their Eastern agent. Among ures. The demand for Roller Skates is fair natural expansion arising from the growth | Snathes or 25 dozen Cradles. Terms as above, the goods they offer are Grosscup's Single in spite of the fact that in some sections

except on winter shipments, on which 60 versible Wood Track Hay Carrier, Malleable days from March I are given. Freight is Iron Grappal, &c. Mr. Thayer is also the representative in this market of the Chieftain Hay Rake Company, of Canton, Ohio. Rakes, Weeders and Hooks, known as Steel This well-known article is sold to the trade

A meeting of the manufacturers of Wrought Iron Goods was held in this city on Monday. The condition of the market was discussed, and it was agreed that there prices. After due consideration it was de cided that the price to the regular trade should be fixed at discount 70 and 10 and 71/2 per cent., cash, 30 days. This covers the line of Staples, Hooks and Staples, Hasps and Staples, Trap Door Rings, Hitching Hooks and Rings, &c. The limit below which the manufacturers are not to sell to any party gives a material advance on rates at which these goods have recently been sold. Prices had unquestionably gone below the point at which a profit is left for the makers, and it will be for the interest of the trade to main tain the prices determined on. The following houses are parties to this agreement :

SARGENT & Co. HUMASON & BECKLEY MFG. Co. WILLIAMS, WHITE & Co. WHEELING HINGE Co. STANLEY WORKS. D. BREWER & Co. AUER & MCMAHON ANTON AUER. KEISER MFG. Co.

In the present condition of the market there are, as our readers know, some lines of goods especially demoralized, the supply being in excess of the demand, and undue competition forcing prices down. Carriage and Tire Bolts belong in this class, business being at present, as it has been for some time, in a very unsatisfactory condition. The demand is reported as unusually light for this season of the year, and the number of manufacturers being large and eager for orders, they are competing for the trade that is offering. As a result, prices have been cut so far that but little, if any, profit remains to the manufacturers. The export demand has also fallen off considerably, though we hear of a few fair-sized orders received on foreign account.

In Carriage Hardware the demand has of late been below the average for this season. but a number of orders, larger or smaller, have been coming in. Prices during the past month have settled somewhat. different manufacturers are adding to their line of goods. In the catalogue of H. D. Smith & Co., Plantsville, Conn., which has recently been issued, we note a number of articles not contained in their previous list. This catalogue, by the way, is handsomely printed in water-marked paper, and has an exceptionally full and convenient index. These manufacturers have during the past year added to their works considerably, having made an addition to their factory of two brick buildings, one 163 x 150 feet, and the other 150 x 40 feet, besides the erection of other smaller additions.

We are also in receipt of the illustrated catalogue of Malleable Iron Carriage and Wagon Hardware made by the Eberhard Manufacturing Company, Cleveland, Objo. and also of their Catalogue A, containing special goods for the general trade, such as Clamps, Picket Pins, Kettle Ears, &c., of which they carry a full line. Their stock amounts, they inform us, to fully 600 tons of finished goods.

The attention of the trade is directed to the advertisement on another page of a new Attachable Ice Creeper, made by Nelson Lyon & Bro., Albany, N. Y. This article is meeting, we are told, with a ready sale, and is being sold by many leading jobbing houses.

On the 10th inst. the Hunter Sifter Manufacturing Company, of Cincinnati, Ohio, was organized as a corporate company with Werner, secretary. The following persons were chosen directors: R. M. Bishop, Jr., J. B. Wilson, Geo. W. Werner, J. M Hunter and Daniel Peters. The change was necessitated by reason of their constantly increasing business.

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Last year was, except in the Southwest, a good skating year, and stocks in dealers hands were generally well depleted, making the business of the manufacturers the presen season fully up to the average. The orders from the large trade have been satisfactory. Prices have not materially changed, but are a trifle lower than last year. At this time trade is light, the large orders being filled and manufacturers and jobbers waiting for the smaller orders which will follow the opening of the skating season, when stocks in retail ers' hands are beginning to be broken. The advertisement of Barney & Berry, the wellknown makers of Skates, will attract the attention of our readers. Their descriptive catalogue for 1883 is elegantly printed, and contains cuts and full descriptions of their goods, with the long prices. We are also in receipt of it in another form, very convenient for store use-the condensed list, with cuts and sizes, mounted on heavy cardboard, with an eyelet hole for hanging it up the other side of the card giving a conven iently arranged cypher telegraph code. By in another column, it will be seen that the

For the commoner styles, on which within a and store; Gartsherrie, \$23 from yard; that they are full of orders on these lines.

small, but the demand is moderate, and it is owing to an advance in freights. not generally necessary to stock up. The which expenses are curtailed.

Reiker's Improved Transom Lifters are quoted discount 35 and 5 per cent. from the ist Oct. 1, 1883.

Mfg. Company, Cincinnati, Ohio, to the retail trade are as follows:

Locks, &c.

800.	Reversible	Mortise	Knobs				\$10.50	net.
840.	0.5	6.6						6.6
810.	6.0	66	6.6				5.50	6.0
K50.	4.6	-4	6.6				# 00	4.4
1220.	Store-Doo						dis.,	50 %
1220.	4.6	44 .						.50 %
Celli	nder Rim I	Night La	itch		per	doz.,	\$10.00	net.
000	Bronze Do	or Knob			6.6	pair.	13.50	44
940.	60	6.6			6.6	66	12.00	8.0
172	4.6	6.6			44	4.6	9.50	6.0
076	4.6	6.0			6.6	4.6	10.00	6.0
Butt	s, pages 8	to 45					dis.	60 2
m	L . T. A.mal	Lange	ble To	10	Ch		1	

factory is 81 to 85 Center street, in this city, manufacturers of Hill Patent Compound Nippers, have appointed the Wiebush & Hilger Hardware Company, 84 and 86 Chambers street, as their sole agents, to whom all orders should be addressed. Prices of these goods remain unchanged; we still quote discount 25 per cent. from list.

C. E. Jennings & Co., 96 Chambers street, are putting in market sets of Merrill & Wilder's Socket Firmer Chisels, handled, sharpened and ready for use. They are centained in a box, with brass hinges and catch, and offered at \$4, net, for a set of 12, from 1/8 inch to 2 inches. Besides the convenience of tools so furnished, it is claimed that in the sharpening they are subjected to an additional test, and the quality assured.

The Cincinnati Stamping Company, who are constantly adding to their general line of manufactures, have issued, under date of Nov. 1, a catalogue and price list of Grocers' and Oil Dealers' Goods as made by them. Most of the articles in this pamphlet are also in their large catalogue, but they are here presented in convenient form for those desiring this special line. They are sold at a discount of 40 per cent.

A company has been formed at New Brighton, Pa., under the title of the Knott & Harker Manufacturing Company, who have purchased the stock and business recently conducted by Merrick & Co., in cluding the use of their patents. They will continue the business for the present at the old stand, and manufacture the usual variety of Grates, Fronts, Fenders, &c., but they intend moving the business to Beaver Falls. Pa., as soon as new and suitable buildings can be erected, when they will extend their operations and add other lines in Miscellane ous Hardware and Novelties. The company is thus constituted: Joseph Wilson, F. K. Brierly, of Wilson & Brierly, Planing Mills; Frank F. Brierly, Hardware; J. W. Knott, late assistant treasurer of Beaver Falls Cutlery Company; W. G. Harker, late foreman at Beaver Falls Car Works.

IRON.

American Pig.-Transactions during the past week have been larger than usual, but the aggregate quantity sold was not up to the expectations warranted by the season. Some agents report a very fair movement, while others characterize business as flat The Thomas Iron Company sold 3000 tons of No. 1 and No. 2 at \$20.50 and \$19.50, respectively, and report that they are very busy just now shipping The greater part of the Pig Iron sold in this market last week consisted of Foundry grades, of course, but there was some demand for Gray Forge. There are inquiries for 1000 and 2000 ton lots of the latter, but prices quoted have evidently not been satisfactory, as they have not led to business. As the rolling mills and Steel \$22 @ \$23, delivered to vessel, with 500 tons works have lately suffered a serious decline in the prices of their products, strong efforts are being made in many directions to get Pig Iron at cheaper rates. The furnacemen, however, are now in a tolerably strong position, owing to the curtailment of their production and the depletion of their stocks, and for standard brands they refuse to make concessions, alleging that the cost of their production cannot be further reduced until Anthracite Coal is furnished them more cheaply, but of this, unfortunately, there is now no prospect. We quote No. 1 Foundry, \$20 @ \$21, at tidewater, with sales of fancy brands at various prices up to \$23; No. 2 Foundry, \$19 @ \$20; Gray Forge, \$17

year or two there has been a material reduc- Langloan, \$23 from ship: Summerlee. tion in price, and which are now sold in \$22.50 to arrive and \$23 from ship; Dalmany cases as leaders, there is a good de- mellington, \$20 to arrive and \$21 from mand, but a great many of the very fine ship; Eglinton, \$20 to arrive. There are goods, of which there are several makes, are rumors of sales under these quotations. The being sold. Several manufacturers report prices quoted "to arrive" are lower than the actual market price. If the Iron were The orders for Guns and Gun Fixtures are wanted immediately it could not be had unlight, and this branch of trade may, on the der \$1 a ton advance. We hear of no transwhole, be pronounced unsatisfactory. Stocks actions in Bessemer or in Middlesboro' Pig. in the hands of the retail trade are reported For Spiegleisen, \$31 is asked for 20 %.

Bar Iron.-The demand continues to dullness in this line may be accounted for-in shrink, and the stores report business very part, at least—by the fact that articles of lux- dull. During the past week there have been party are, in such times as these, the first in fewer mill representatives in the city than usual, however, and consequently prices have not suffered any decline from those previously quoted. We hear of no Bar mills closing, but understand that none are running The regular prices of the Morris Sash Lock [full. Further curtailment of production will he necessary, if an improvement in trade would be effected. The local mills are just now meeting with fierce competition from the Pittsburgh mills, which deliver Iron here cheaper than Eastern establishments can afford to. Quotations are nominal, depending on specifications, the views of the buyer and the necessities of the seller, but as nearly as they can be stated they are as follows : Best Refined, 1.9¢ @ 2.2¢ at mill. and 2.2¢ @ 2.3¢ from store; Common Iron, 1.7\$ @ 1.75\$ at mill, and 2\$ @ 2.1\$ from

> Structural and Shaped Iron .- The demand is very limited, and the market may be termed dull. Prices are unchanged, how ever, as follows: Beams, 3.5¢ on wharf for ound lots; Angles, 2.6¢ @ 2.8¢ from store; T's, 31/4 @ 31/2¢ from store.

> ing received to some extent, but business is not at all brisk. We quote as follows : Comnon or Tank, 2.5¢ @ 2.6¢; Refined, 2.75¢; Shell, 3¢ @ 3¼¢; Flange, 4¢ @ 4¼¢; Extra Flange, 41/2 @ 5¢.

> Sheet Iron. - Reports from all sides agree that business is fully as dull as ever, and prices of Thin Sheets have been slightly reduced to correspond with the shrinkage in demand. It is stated that the last importations for the season of Russia Sheet Iron have been received, in consequence of the closing of navigation in North Russian There is a fair demand for Heavy waters. Sheets. We quote on the basis of 3¢ @ 3.3¢ for Nos. 10 to 16. Lighter sizes are quoted in our New York Wholesale Price List.

> Steel .- There is no improvement to note, though there is the usual season's demand for such Steels as Toe-calk and Sleigh-shoe, but at very low and unremunerative prices. We continue to quote American Tool Steel at 11¢, with a concession to large buyers; Crucible Machinery, 61/2 # @ 7#; Bessemer and Open-hearth Machinery, 31/4 @ 4/6; Toe-calk, 316 @ 356; Sleigh-shoe, 36; Boiler Plates, 51/4 @ 51/4, with extra for special sizes; English Tool, 151/2¢.

Wire Rods .- There is much disappointnent at the limited demand, dullness being the rule in this as well as other branches of the Iron and Steel trades. Steel Rods are quoted at \$47 @ \$50; Iron Rods, \$53.50 @ two \$57.50; Swedish Rods, \$66.50 @ \$68.50.

Steel Rails. - The transactions of the over it. The prices received have varied We understand that the Edgar Thomson and export will probably show an increase Steel Works have made several provisional over last year of fully 6000 tons to date." sales of Rails, conditioned upon their men desiring to work at the reduced rate of wages rendered necessary by \$35 Rails. The Pittsburgh Bessemer Works are entirely out Pittsburgh Bessemer Works are entirely out 1882, and 10,118 in 1881. Manufac of the market for Rails at present prices and may be quoted as under: Bottoms. vailing conditions. The materials cannot be Copper, 24¢. bought and Rails made with the present prices of labor. We have learned that two of the leading Eastern Steel Rail companies have been offered a large contract for Rails at \$35 for delivery in the winter of 1884-85, but both have declined, thus indicating that they believe bottom has been reached.

Old Material .- We hear of sales amounting to 400 tons of No. 1 Wrought Scrap at more offering. Selected Yard Scrap is tons. Singapore cables £89, 10/, cost and quoted at \$23 @ \$24, but there is very little movement. Light Scrap has been sold to more offering. Selected Yard Scrap is some extent at \$17. Of Old Rails 1000 tons have been sold at \$21, delivered at a point on the Hudson River, and 1000 tons have been sold on private terms, delivered in New York Harbor. Sample lots of Double Heads have been ordered for shipment from the other side, and are quoted at \$25.50. Sales some extent at \$17. Of Old Rails 1000 tons of English Leaf Spring Steel have been made at about \$26. Wrought-Iron Turnings have been moved at \$15.

Tuesday, November 13. There were no other transactions than the

above, which foot up 1400 tons of Pig Iron, 60 tons of Tin and 25,000 pounds of Copper. The 1000-ton lot of Pig Iron was the largest transaction that has ever taken place on the floor of the Exchange. It may be remarked that the tone of the leading members of the Exchange has recently been undergoing a change, and that now the prevailing sentiment is in favor of higher prices. The bulls" are in the ascendant.

The Exchange has recently suffered the ss by death of one of its prominent members, Mr. George H. Stroud, youngest son of Mr. Wm. Lawrence Stroud, of Stroud, Sibbald & Co. A special meeting was held on the afternoon of the 12th inst. to take action relative thereto. As the president, Mr. Delafield, was not present, Mr. John C. Cook called the meeting to order. Appropriate remarks were made by Messrs. Joseph Byrne and James M. Montgomery. The following resolutions were then introduced by Mr. Montgomery, and were unanimously adopted:

Whereas. The members of the New York Metal Exchange have learned with deep regret of the death of Mr. George H. Stroud, Resolved, That by his death the community ses a young man of recognized virtues in his social circle, and that we mourn the loss of a young member, whose future promised to be so valuable to the prosperity of the

Exchange.

Resolved, That we tender our sincere sympathy to his family in their sad affliction, and that a copy of these resolutions be sent them in testim ony of our respect.

On Wednesday afternoon a special meeting was held to consider the proposed insur-Plate Iron.-The condition of the trade ance plan, and to recommend such changes about as it was last week. Orders are be- in it as seemed to be necessary to adapt it to the purposes of the Exchange.

METALS.

Copper.-Our market has continued very quiet during the week, sales of Lake Supe rior being restricted to 100,000 fb at 14 1/8 \$ @ 15¢, closing at 15¢ nominally, other brands being worth 141/4 @ 143/4 . London cabled yesterday Chili Bars, £61, and Best Selected, £66, and to day we receive from there the ensuing message: "Market weaker and ensuing message: "Market weaker and prices reduced. Best Selected, £66 @ £67, and Chili Bars, £59. 10/@ £60. 5/." Messrs. James Lewis & Son, Liverpool, November , write: "The last few days there has holders, notwithstanding the exceptionally arge deliveries in Liverpool, Swansea and London, amounting to 5540 tons Fine, the important reduction in stocks, and charters advised as only 1600 tons Fine. The stock in England and France is now lower than it has been since the 15th of January, when Chili Bars were at £67. This time last year, when the visible supply was the same as at present, Bars were at £69. 10/. The arrivals from the United States consist of 218 tons Bars, 547 tons Matte, and 1120 tons Ore, equal to about 946 tons Fine Copper. The total arrivals at this port to date this year represent about 7125 tons Fine Copper. The statistics we give herewith show rer. a reduced English consumption, compared with last year, for the first nine months of 2445 tons fine, but an increased French conamption of 3861 tons. The imports into the countries have increased 11,802 tons. and the exports from England, 2804 tons. It should be borne in mind that an increased supply of at least 7000 tons of Copper was past week have been comparatively limited, notwithstanding the rumors prevalent of very large sales. Possibly 50,000 tons have been placed during the past week, but the real quantity is under that figure rather than port is 4326 tons greater. As the deliveries the past month have been 1749 tons greater than in October, 1882, and the arrivals 106 from \$35 to \$37 at mill, according to location of mill, time of delivery and size of order. Spanish Ore export first eight months, 407,-032 tons, against 407,073 in 1882, and 324,-078 in 1881. Spanish Copper export first eight months, 15,947 tons, against 14,253 in Manufactures will cease to manufacture them under pre- Braziers, 24¢; Sheathing, 22¢, and Bolt

Tin .- During the week under review our market has become quite demoralized and unsettled by the declining tendency in the London market, where Straits, on the spot, sold last night at £87. 10/, while to-day we are cabled thence to the following effect: "Tin is weaker and lower. Straits Ingot, spot, £87. 10/@ £88. 10/, and futures, £87. 15/@ £88. 10/." Shipments from the Straits' Settlements during the week from November 6 to November 13 have been—to England 300 tons, and to New York 100 large lots. Tin Plates have been moderately market is quiet and prices without change.

Lead.—The drooping tendency has not been arrested, but lower prices have been accepted, some 200 tons Common selling at TRANSACTIONS ON THE NEW YORK \$3.90, while Refined is worth \$3.95 @ \$4. St. Louis is down to \$3.60 with Hard, and to **TRANSACTIONS ON THE NEW 10th St. Louis is down to \$3.00 with mard, and to \$3.65, Soft. Spanish exportation so far this year is at the rate of 125,216 tons, for it has been 83,477 tons during the first eight ron is very dull and depressed, and we hear to we week:

**TRANSACTIONS ON THE NEW 10th St. Louis is down to \$3.00 with mard, and to \$3.65, Soft. Spanish exportation so far this year is at the rate of 125,216 tons, for it has been 83,477 tons during the first eight months, against last year 77,070, and 71,168 tons in 1881. A couple of years ago Spain METAL EXCHANGE.

Strong Pig. Story Forge, \$17
Story Forge

Spelter and Zine .- Strange to say, Comon Domestic Spelter remains as stagnant and weak as ever, notwithstanding the very low price to which it has been depressed, say, 436 @ 41/4, which seems below the intrinsic value of the metal. Unfortunately for Spelter roducers, this metal suffers indirectly from the gloom which overhangs the entire metal market. We quote Silesian, nominally, 5¢ @ 51/8¢; Silesian Union sold at Breslau at 204 marks 6 ton. We receive the ensuing o4 marks ton. We receive the ensuing able message from London this afternoon: "Market firmer. Ordinary, at shipping ports, £15, 12/6." Spanish Calamine expor-25,466 tons, against 22,839 last year, and 23,545 in 1831. We quote Bertha Refined, 734¢ @ 8¢, and Bergenport. QLA get Zine is moderately active and steady at 534 0 @ 578 4.

Antimony-Has been quiet at 9¢ Hallet, and 101/8¢ @ 101/4¢ Cookson.

EXPORTS

Of Hardware, Iron, Machinery, Metals. &c., from the Port of New York, for the week ending November 13, 1883.

Quan. Val. Axles, case... 1 \$15 Springs, case. 1 50 Mach'y oil, cs 20 144 Bremen. Quan. Val.
Ptlm.,g'ls 644,850 \$50,500
Mach'y, pk; 8 2,800
Copper, bars. 853 8,000
Cl'ck w'rks,cs 1 270
Cutlow'rks,cs 10 602 British East Indies Cl'ek w'rks,es 1 Cutlery, es... 10 Hdw., pkgs... 59 Nic'l mat.,bbis 50 Ag. imp., pkgs 5 Ptlm.,gls1,244,970 122,947 Hdw., pkge. . . 1 82 Sew. mchs.,cs. 10 150 Ag. imp., pkgs 2 20 New Zealand. Antwerp. Mach'y, pkge. 1 gals.515,700 44,000 Cadiz.

Ptlm. gals..20,000 2,000 Hdw., case... 1 20 128 1,166 Firearms, cs. 41
Pumps, pkgs. 6
Sew. ma., cs. 193
Hdw., cs. 28
Clocks, pkgs. 2 Havre. Ag. imp., pgs. 29 1,986 Copper, bars. 563 16,816 Ptlm., gals.688,213 51,676 Clocks on Dutch East Indies. Ptlm., gals. 851,200 32,925 Hdw., pkgs... 58 Hamburg. Marsettles.
Ptlm., gals.181,080 10,802
Ag. imp., pkgs 4 275
Ox. zine, bbis. 4 50

Ag. imp., pkgs. 5 5 Mf. iron, pkgs. 25 8 Saws, cs. ... 2 Saws, pkgs. 46 5.2 Hdw., pkgs. 59 1,6 Pumps, pkge. 1 Blowers. 2 Sew. ma., cs. 1/43 24,2 Clocks, cs. ... 14 5 Blaye. Ptlm., gals.279,941 21,346 Dunkirk. Ptlm., gals.448,992 82,842 584 French West Indies. vanish West Indies. Ptlm., gals... 800 Hdw., case... 1 Ptlm., gals.... 52 Nails, kegs.... 8 Ag. imp., pkgs 10 Vigo. Ptlm., gals. 61,000 6,200

Ag. imp., pkgs 8
Mf. iron, pkgs 8
Iron, es 9
Arms, case . . 1
Ptlm., gals . . . 100 57 45 114 2 1,300 Cuba. Copenhagen. Mfd. iron,pkg. 1 Clocks, pkgs.. 127 Hdw., pkgs... 14

Christiania. St'p'd ware,cs 8 Hdw., cs..... 27 Ptymouth. See: 0ars, 61s 56 Sew. ma., cs. 94 Mf. iron, pkgs 420 Hdw., pkgs... 67 Cutlery, cs... 16 Nails, kegs... 8:5 Ptim., gals. 181,014 Ag. imp., pkgs 2 128 Cutlery, cs.... 3 54 Liverpool.

Nick Fore-Hols 25 3,000 Pumps. pkgs. 23 1,039 Clocks, cs.... 625 12,832 Mach'y, pkgs. 65 18,272 Cop. mat.,bgs1300 10,419 Alexandria. Ptlm., gals. 126,100 11,849 Porto Rico. Cop. in Ptlm., gals....2840 Mf. iron, pkgs 56 Spanish Possessions in Africa. Ptlm., gals....2000

Mf. iron, pgs... 4 65 Sew. mchs, cs. 1355 18,403 Nick'l plate, cs. 3 425 Copper, bars... 520 12,008 Platinum, case 1 6,979 Valencia. tinum, case 1 6,979 volvers, cs. 43 8,175 Mexico. Mf. iron, pkgs. 266 Hdw., pkgs. 40 Mach'y, pkgs. 107 Clocks, pkgs. 13 Scales, es. . . . 6 Ptlm., gals. 16,000 Rotterdam. Hdw., pkgs. 8 390 Ag imp., pkg. 1 50 Ptim., gals 172,301 13,776 Pumps, pkgs. 2 75

London. Turn sneins, cs. 3 Nails, kegs... 20 Steel, cs... 7 Cutlery, cs... 82 Pumps, pkgs. 2 Ag. imp., pkgs 15 Cartridges, cs. 15

Sharpness.

Mach'y, pkgs 4 238 Ag, imp., pkgs 11 415 Sew. mchs, cs. 435 8,205 Hdw., pkgs. 2 83 Saws, case 1 3 Mf. 1ron, pkgs. 100 798 Clocks, cs. 15 221 Ag. imp., pkgs 52 455
Sow mells, cs 221 5,800
Clocks, pkgs. 47 775
British West Indies.
Mach'v, pkgs. 63 1,015
Nails, cs. 2 11
Clocks, pkgs. 6 90
Ag. imp., pgs. 15 87
Cop. gds., cse. 1 35
Cop. gds., cse. 1 35
Sew. mehs, cs. 2 16
Sew. mehs, cs. 2 16
Sew. mehs, cs. 2 17
Tacks, cs. 2 18
Sew. mehs, cs. 17
Scales, cs. 2 16
Sew. mehs, cs. 17
Seeler ails. 858
Seeler ails. 858
Sew. ma., cs. 6 17
John, gals. 37,039
John, pkgs. 64
Antimony, cks. 6 15
Antimony, cks. 4 20
Antimony, cks. 4 20
Antimony, cks. 4 20
British Australia
British Australia
Hdw., pkgs. 424 8,637
Mfd. fron, pgs. 35
M

Mf. fron, pkgs 528 \$4.0*2

IMPORTS Of Hardware, Iron, Steel and Metals into the Port of New York, for the Week end-

Iron safes

Lead pipe, tub Iron roofi'g, ca

90 Hdw., pkgs... 16 Sandwich Islands.

Chili.

ing Nov. 14, 1883. Pierson & Co.
Sheefs, bdls., 168
Bars, 52
Reismann G.
Wire, case, 1
Stetson G. W. & Co.
Pig. tons, 2:0
Ward Jas. E. & Co.
Old iron, tons, 20
Williamson Jas, & W Hardware, Armour, Plankinton & Co.
Mach'y, bxs., 4
Arnold F. R. & Co. Arnold F. R. & Co.
Cases, 7

Auffuordt C. A. & Co.
Mach y, cs., 5

Baldwin Bros. & Co.
Gun barrels, cs., 14

Brown Bros. & Co.
Cases, 7

Boker Hermann & Co.
Hdw., cutlery, and
guns, pkgs., 20

Dinglestadt & Co.
Machy, cs. 4 Old fron, tous, 200
Williamson Jas. & Co.
Pig. tons, 400
Wood, Niebuhr & Co.
Wire rods, pkgs., 245
Order. Order, Pig, tons, 1175 rods,

Pic, tons, 1175 Screw rods, pkgs. 1491 Rods, pkgs., 2871 Sheets, bdls., 1270 Channel bars, 154 Bars, 2227 Galv. wire coils, 315 Pipes, 200 Cast pipes, 172 Bundles, 497 Joists for Montreal, Mach'y, cs., 4
Degrauw, Aymar & Co.
Mdse., cs., 9
Downing, Sheldon & Co.
Gun haymat. 14 Rods, bdfs., 16,947 Slabs, 45 Spiegel, tons, 157 Railroad bars, 3286

Arms, cs., 5
Mdse., cs., 12
Folsom H. & D.
Arms, cs., 15
Gun barrels, cs., 4
Godfrey C. J.
Arms, cs., 3
Great Western Disp. Co.
Arms, cs., 3 Strel. Abbott Jere & Co. Cases, 94 Bundles, 35 Tires, 33 Bars, 8
Allis Mfg. Co.
Rods, pkgs., 786
Downing, Sheldon & Co.
Bundles, 21
Bars, 14
Cases 2 Mach'y, case, Hartley, Graham Arms, es., 4
Mdse., es., 10
Heath M. C.
Mach'y, case, 1
Heppenheimer & Maurer
Machines, es., 7
Junge F. W. & Co.
Gun harrels, case, 1 Moss F. W.
Packages, 46
Plock & Co.
Car wheel tires, 146
Porter Bros. & Co.
Cases, 15
Bundles, 116
Bars. 38

Heppenheimer & Mau Machines, cs., 7 Junge F. W. & Co. Gun barrels, case, S. Chains, cks., 22 Screw jacks, 22 Levers, case, 1 Merch. Disp. Co. Cutlery, cs., 5 Moore's Sons J. P. Guns, cs., 6 Pierson & Co. Rivets, cks., 4 Putney D. Gun barrels, cs., 5 Reading Hardware Co. Cases, 3 Schoverling, Daly Bars, 28 Cases, 3 Woltmann & Mickerts, Packages, 337 Order, Strips, cks., 33 Rails, 13.5 Cases, 3
Schoverling, Daly & Gales,
Mdse., cs., 6
Seymour Cutiery Co.
Pkge., 1
Spencer Arms Co. Ralfs, 1325 Sprinz steel, tons, 1525 Rods, bdls., 7520 Packages, 552 Wire rods, pkgs., 17,041 Bandes, 140 Bundles, 68 Casks, 4

Spencer Arms Co.
Arms, case, 1
Thurber H. K. & F. B.
Mach'y, cs., 2
Taylor Thos.
Mdse., cs., 4 Mdse., cs., 4 Vom Cleff & Co. Mdse., cs., 12 Wiebusch, Hilger & Co. Anvils, 244 Metals. Bank of Montreal, Tin plates, bxs., 3848 Clyde Win. P. & Co. Old copper, bibs., 2 Old copper, bxs., 7 De Bracklaer E. Cases, 7 Waefelaer & Wood, Iron hook nails, Brassware, cs., 2 Dickerson, Van Dusen & 25 Wolff R. H. & Co. Tin plates, bys., 266 Great Western Dispatch

Order, Nails for Toronto. cs., 16 Great Western Dispatch
Co.,
Zinc roods, case, 1
Jerome & Co.
Bells, piczs., 27
Ketchum E. & Co.
Tin plates, bxs., 220
Phelps, Dodze & Co.
Tin plates, bxs., 23,031
Black taggers, bxs.,
137
Vom Cleff & Co.
Mdsc., case, 1 Iron. Coddington T. B. & Co. Sheets, bdls., 908
Crocker Bros.
Splegel, tons, 570
Pig. tons, 230
Dickerson, Van Dusen & Co.
Lillienburg N. Vom Cteff & Co. Mdsc., case, 1 Wolff R. H. & Co. Tinned wire, pkgs. 217 Order, Tin plates, bxs., 15,552 Lee Jas. & Co.
Pig. tons, 100
Lundberg Gust.
Wire rods, bdls., 544

Zinc oxide, bdls., 50 Tin plates, bxs., 1317 Tin, ingots, 2115 Tin, bbls., 10 Tin, slabs, 3 101 Casting, ck., 1 Naylor & Co. Spiezeleisen, cks., 1240 Ag. imp., pkgs.
Pumps, pkgs.
4 207
Pumps, pkgs.
176 5,746
Ptlm., g*\s2,104,455 173,612
Ptlm., g*\s2,104

	British Honduras.	Purchasing prices offered by dealers are as
	Firew'ks, cs 5 147	follows:
	Sew. ma., cs 9 204 Ptim., gals 8474 881	Copper, heavy 2 b. \$0.12 @
	Nails, kegs 41 120	light 10 62
	Hdw., cs 8 154	Copper Bottoms " .10 @
	Oporto.	Yellow Metal " .0736 60
		Brass, heavy ** .09 @
	Hdw., cs 2 13	
	Ptlm., gals.118,500 10,000	from from a contract to the co
	San Domingo.	Land, heavy
	Hdw., pkgs 25 249	100 LC001
	Nails, kegs 74 247	Zinc
	Lead, kess 2 16	Pewter, No. 1
	Buckles, pkgs 8 88	NO. Z
	Wheels and a.,	Wrought from the ton, 22.00 (c)
	prs 22 207	I Makilly the Land of the Land
	Mach'y, pkgs. 72 1,190	patove rate from
	Scales, pkgs 17 834	Machinery 14.30 67 13.00
	Wash, mach., 1 17	CITAGO DATA 4.00 (C
	Steel rails 858 2,634	Stereotype Plates P D0436 @ .0434
	Tacks, cs 2 29	Electrotype
	Sew. ma., cs 6 113	Small Type " .05 @
	Iron tanks 2 425	
	Ptim., gals6100 768	
	Cutlery, cs 10 264	Clauses Vinon 51 H, 912 co. A
	Mf. iron, pkgs 17 806	Canvas, Linen
	Iron, bdls 5 21	White Couldn't them
į	Copper goods,	White, No. 1
Ì	pkgs 7 721	
	Valves, case 1 40	Seconds " local e
	Ag. imp., pkgs 8 24	Soft Woolens
1	Hayti.	Mixed Rags " 11g to 11g
	Hdw., cs 2 24	Gunny Bagging 11g in c
	Nails, kegs 15 45	Jute Butts
	Ptlm., gals 850 40	Kentucky Baccing
	Rifles, cs 2 90	Book Stock " 136 or 10 c
	Sew. ma., cs 18 87	Newspapers 1 @
	Brazil.	Waste Paper and Scraps " 16 0
	Rifler on 0 900	

Nov

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The

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about all that is produced-i. c., an average of 700,000 tons and upward every week— which fact alone indicates the magnitude of the Coal business. Prices are pretty well maintained, generally on the basis of Au-Free-burning Coal alongside in New York may be quoted \$4.70; Broken and Egg, dull. Chestnut has sold for \$3.90 @ \$4.25 alongside, according to quality. About \$2.80 @ \$3 is a fair quotation for Pea. Lehigh is quoted—Lump, \$4.90 @ \$5.25; Chestnut, \$4.50. The Delaware, Lacka-wanna and Western Railroad Company have decided to extend their Coal business. building enormous bunkers at South Chicago, and establishing a line of barges between that port and Buffalo, one effect of which will be to relieve the Eastern market. The Coal companies at present say nothing about a suspension in December. The Potts-ville Journal says the trade in furnace sizes continues to be slack. Bituminous Coal is perhaps in a little better demand, with ined shipments from the mining regions, and in some instances prices are improved.

FOREIGN TRADE MOVEMENTS.

Included in the imports for the week end ing November 9 were lading articles of mer-chandise valued as follows:

	I'REEB.	A SPLITS
Antimony	34	\$1,52
Brass goods	55	5,98
Bronzes	47	8.41
Chains and anchors	38	1.87
Clocks	60	5,77
Copper		12,77
Cutlery		32.09
Gas fixtures		75
Guns		21,19
Hardware	7	80
fron, hoop, tons	1	8
Iron, pig, ton	2.413	89,09
Iron, sheet, tons	871	43,75
Iron, other, tons	1,163	85,48
Lead, pigs		5,98
Machinery	184	11,86
Metal goods	198	19.88
Nails	6	Bi
Needles	12	2,82
Nickel.	14	4,55
Old metal		163
Platina	9	18,08
Plumbago	842	11,01
Platedware	10	6,663
	8	1,001
Percussion caps	81	1,78
Pins	19	1,90
Saddlery	2,317	29,459
Steel	45,578	221,86
	45,578	221,836
Tin slabs, 4222; lbs i	514	9,42
Wire	511	
Zinc, oxide	848	3,84

The imports of hardware and metals compare with previous dates as follows :

	For the week.	45 weeks of 1888.	Same time 1882.
Cutlery, pkgs	84	6,533	6,455
Hardware, pkgs	7	1,023	908
Iron, R. R., bars		10,789	92,924
Lead, pigs	1,645	12,124	28,858
Steel, pkges	2,817	2,454,211	1,712,595
Tin, bxs	45,578	1.894,728	1,940,784
Tin slabs, Ds	459,010	20,556,500	17,931,999

PHILADELPHIA.

Office of The Iron Age, 220 South Fourth St., Pulladelphia, November 13, 1883.

Pig Iron -The indications of improve ment noted in our last appear to have been confirmed, sales in 1000 ton lots having been made at an advance of about 25¢ \$\emptyset{1}\$ ton, as compared with prices 10 or 15 days ago. The upward movement is not general, however, but it is a significant fact that the advance has been on large lots, and not on 50 or 100 ton lots. The amount of business transacted has not been unusually large, but a few heavy consumers have felt it necessary to cover at least some portion of their requirements, and, as already stated, this could only be done by paying slightly higher prices. The smaller class of buyers higher prices. The smaller class of buyers may not be called upon to pay any advance at all, but concessions of 50% (a) 1 10 ton, which were granted some time ago, cannot now be had even by the very best class of buyers. This condition of affairs seems to indicate that stocks are in manageable shape and not larger than required for the ordinary run of trade in quired for the ordinary run of trade, in which case a gradually hardening tendency in prices will naturally follow. It is rather in prices will naturally follow. It is rather premature to make predictions, however, and consumers are disposed to wait develop-ments, in the meantime taking only such lots as are required for use within the next 30 days. Sellers are also equally careful not to drive trade away by asking higher prices, and are entering orders to a moderate ex-tent for forward delivery at current rates, and, in fact, doing all that can be done to retain their trade without sacrificing prices. Confidence in values would be much stronger if the demand for Finished Iron were better. long as that remains in its presen dull and depressed condition, consumers are not likely to take alarm because of a slight stiffening in Pig Iron. At the same time, no doubt whatever that the market for raw material is in better condition than it has been for several months, and it is generally believed that prices can be maintained, although the crucial point will probably be six or eight weeks later on. Sales during the week (for tidewater deliveries) bave been as follows: Gray Forge, \$18 @ \$18.50, choice brands up to \$20; No. 2 Foundry, \$19 @ \$20; and No. 1 Foundry, \$20.50 @ \$22; market quiet and steady.

Foreign Iron -No inquiries likely to lead to business, although Bessemer is offered at \$20.50, and 20 % Spiegeleisen at \$30.50. Muck Bars .- Demand rather light, with

sellers of best qualities at \$33 @ \$33.50 at Blooms, -There has been rather more

business doing, but prices are very irregular. Sales of small lots at about the following prices: Charcoal Blooms, \$55 @ \$57; Ronout Arthracite, \$47.50; Scrap Blooms, \$42 @ \$43; Northern Ore Blooms, \$39.50 @

Bar Iron .- The market remains in the same dull and unsatisfactory condition as than to work for nothing or at a loss. There is no is considerable iron being sold every week. doubt that consumption has fallen off to a nearly all in small lots, and our home furvery serious extent, and at this late season naces have all they can do. We repeat there is nothing to warrant hopes of im-provement until after the holidays. Some mill owners are talking of shutting down about the middle of next month, and, unless business improves, the suspension will prob ably be more protracted than usual. Not only is the demand light, but prices are most unsatisfactory—in many cases little, if anything, beyond first cost. Still, manufactureers are very unwilling to lose their trade, and, in the hope of something more favorable turning up later on, they accept the best unsatisfactory—in many cases little, if anything, beyond first cost. Still, manufactureers are very unwilling to lose their trade, and, in the hope of something more favorable turning up later on, they accept the best unsatisfactory—in many cases little, if anything, beyond first cost. Still, manufactureers are very unwilling to lose their trade, and, in the hope of something more favorable the present low figures, have reached bottom the present low figures.

prices they can get, so as to keep at work a few weeks longer, by which time it is expected that the outlook will be more clearly defined. On such a market it is difficult to quote prices with precision, but the range is from 2ϕ to 2.2ϕ , with the majority of trans-actions at about medium figures, according to quantity, quality and specification of sizes.

Plate and Tank Iron.-With the ex eption of the demand from the shipyards ception of the demand from the snipyards there is very little new business offering, and prices continue weak, with a slight downward tendency. The mills have a moderate amount of work under contract, and will probably have no difficulty in utilizing their full capacity during the balance of the year, but there is increasing anyiety in regard to but there is increasing auxiety in regard to the future, and for good-sized lots prices can be shaded a little. Asking prices are about as follows: Tank Iron. 2.5¢; Boat Plate, 2.35¢ @ 2.4¢; Sbell, 3¢ @ 3.25¢; Flange, 4¢ @ 4.25¢, and Fire-Box, 5¢ @ 5.5¢.

Structural Iron.—There is very little

change to report, the demand being only moderate at about former quotations. The recent inquiries from the shipyards have resulted in orders for something near 1000 tons of Shapes, beyond which no transactions of importance have been heard of for some days. The outlook is not specially encouraging, but prices remain as last quoted, viz.: Double-Refined Bars, 2.4¢ @ 2.5¢; Bridge Plates, 2.5¢; Angles, 2.3¢ @ 2.4¢; Tees, 2.8¢ @ 3¢; Beams and Channels, 3.5¢.

Sheet Iron.—The demand is somewhat irregular, but, on the whole, has been fairly satisfactory for Thin Sheets, while other descriptions are dull and neglected. The sale of Sheet Iron has probably been heavier than in any previous year, but production has been increased to a still greater extent, so that competition for business is as keen as ever. For small lots quotations are about as

,	TOHOWS.
	Common Sheets, No. 28 43
ŀ	Common Sheets, Nos. 26 and 27 4
	Common Sheets, Nos. 21 to 25
1	Common Sheets, Nos. 18 to 20
	Best Refined, 1/4 % advance on the above.
	Best Bloom Sheets, Nos. 26 to 25
	Best Bloom Sheets, Nos. 22 to 25
	Best Bloom Sheets, Nos. 16 to 21
	Common Red Plates, 3-16 to 16 2.
	Blue Annealed 2.
	Best Bloom, Galvanized, discount 4
	Second quality, discount 5
П	Common

Wrought Iron Pipe.-The market continues in a fairly satisfactory condition as regards the amount of business done, and manufacturers appear to consider the position a trifle more satisfactory. Prices, however, are unchanged, and remain as last quoted, viz.: 70 and 10 % off on Gas and Steam Pipe and 621/2 % off on Boiler Tubes.

Steel Rails.—There is no special change to note, the general position being much the same as during the previous week. A moderate amount of business is being done at prices ranging from \$36 to \$37, but it is understood that several additional large lots have been sold for winter and spring delivery at about \$35. but it is impossible to get particulars. At the same time, there is no particulars. At the same time, there is no reason to doubt that sellers are willing to accept that price for winter work, and for large lots \$35 @ \$36, according to delivery, is probably a fair quotation. It is thought that further transactions based on the above uotations will be closed in course of a few

Old Rails.-There is a fair amount of inquiry and prices are firm. Sales have been made at \$24, Philadelphia, for Old American T's, with additional lot under negotiation at same price. Foreign T's for shipment are offered at \$23.50, with buyers at \$23.25. Market steady.

Scrap Iron.-Choice No. I commands \$24.50 @ \$25; medium, about \$23.50 @ \$24, and cargo lots \$22.50 @ \$23; Machinery

erap, \$16 @ \$17, according to quality.
Nulls.—Although there is still a good
usiness doing, the market at the moment business doing, the market at the moment appears to be somewhat quieter, and there is less difficulty in securing Nails than has been the case for some time past. We quote \$2.85 @ \$2.90 \ keg, with still lower figures in exceptional cases.

Mr. Jones Wister, formerly manager of the Wister Furnace, at Harrisburg, Pa., has been admitted to an interest in the firm of L. & R. Wister & Co., of Philadelphia.

PITTSBURGH.

Office of The Iron Age, 77 Fourth Avenue, EPITTSBURGH, PA., Nov. 13, 1888.

eneral Iron trade is far from being satisfactory, its condition is not so bad as some here and elsewhere In Pitt-burgh, at least, the volmake it ume of business continues large, as is evident from the fact that the mills are nearly all in operation, some working up to their full capacity, and large shipmen are being made daily by river and rail. Advices from Chicago, Milwaukee, St. Louis and other large points of distribution West and South are of a similar character; competition is active, and the anxiety to secure business is so great that prices are cut to such an extent that the margin for profit is exceedingly small.

Pig Iron.-There has been but little ange in the condition of the market during week; business is all that can be ected under existing circumstances, and remain unchanged. most without exception, are adhering closely to the hand-to-mouth policy, buying only as immediate wants require, and the indications are that they will stick pretty closely to this course until the close of the year. Producers still refuse to make any concessions, claiming that rather than do so they will blow out, on the ground that it is better to do nothing

HUCCS HULL BUT PHOY CO	BEE CEU.	AA O T	chege
former quotations:			
No. 1 Foundry	\$21.00 @	\$23.00,	mos
No. 2 "	19.00 @		
Neutral Gray Forge	17.00 @	18,00, 4	
Mottled and White	10.00 GC		6.5
Silvery Iron	15.00 @	18.50,	1
All-Ore Mill	12.00 (6	20.00, 4	
Warm-blast Charcoal	24.00 @	28.00, 4	4.0
Cold " "	25.00 (0	33.00, 4	66
Bessemer tron	20.50 @	21.00, 4	0.0

are still quoted at \$32 @ \$32.50, cash, but few sellers as yet at inside quotations.

Manufactured Iron.—There has been nothing new developed during the past week; the mills are all in operation, some working single, others double, and manufacturers report no change in prices, which are very unsatisfactory. Orders are mostly small, which indicates an apprehension of lower prices on the part of buyers, who are keeping themselves in position to take advantage of the same in the event of a decline We continue to quote prices on a basis of 1.8¢ to 1.9¢ for Bars—that is, for assorted orders, 60 days-with the usual discount of 2 % for cash.

Nails.-The demand is falling off and prices continue weak; sales have been made as low as \$2.55, and even \$2.50 for car lots, 60 days, 2% off for cash, and 5¢ @ 10¢ P keg additional for small lots. The regular monthly meeting of the Western Nail Asso-ciation takes place to-morrow, but the indi-cations are that the matter of production will not be taken up-that each firm will be at liberty to run or stop, as they please.

Wrought Iron Pipe .- Orders have comnced to fall off, but the Pipe mills are still in operation working up old contracts. The mills here have had about all they could do since last spring, but prices have been cut so close that there has been little or no margin for profit. Discounts remain unchanged at 73 @ 75 % on Gas and Steam Pipe, and 60 % n Boiler Tubes.

Steel.—This important interest remains unchanged in regard to demand and prices. unchanged in regard to demand and prices. both of which are unsatisfactory. Standard brands Refined Cast Steel, 11¢ @ 12¢ ? B. t. do. Crucible Machinery, 6½¢ @ 7¢; Openhearth and Bessemer do., 4½¢ @ 5¢; Steel Boiler-plate, 6¢ @ 6½¢. Nearly all steamers on Western and Southern rivers are now supplied with Steel Boilers.

Old Rails.-Some few small sales of American T's have been made during the past week at \$23.50, but they were not first class; we are reliably informed that standard brands cannot be laid down here under \$24.50, and the last sale reported was at \$24.50. The demand, however, is light, and some of our largest consumers are pretty well supplied

Steel Rails .- This important interest continues in an unsettled and unsatisfactory that it may be necessary before long to reduce production, in view of the lack of orders, and then at the prices the margin for profit is light. However, some of the mills are pretty well sold for next year, and there is a probability that there will be an increased demand in January, if not before. Prices for delivery this month or next may be quoted at \$30.50 @ \$37, cash, at mill.

Railway Track Nightles — Prices

Railway Track Supplies.— Business continues slow; prices weak, but nominally unchanged: Railway Spikes, 2.6¢, 30 days; Splice Bars, 1.9¢ @ 2¢; Track Bolts, 3¢ @ 3¼¢, with square and hexagon nuts.

Crop Ends.—American are still quoted at \$23.50; the last sale of Foreign reported

\$23.50; the last sale of Foreign reported was at \$25.15, delivered in Pittsburgh.

Scrap.—Wrought Scrap remains unchanged at \$21 @ \$22.50 ft net ton. Sales Selected Raiway Shoo at \$22.50; Old Car Axles, \$30 @ \$32; Wrought Turnings, \$16 @ \$18; Old Car Wheels, \$19 @ \$19.50, gross; Cast Borings, \$13 @ \$14.

Window tilass.—The strike continues, but it is intimated that the strikers are disposed to have a conference. It is not

disposed to have a conference. It is not likely that the factories will be started up before January, if then. Our manufacturers are still putting out considerable Eastern glass; but, as might be expected, they are having a good deal of trouble in filling their orders, for want of an assortment.

Coke.—The general situation remains unchanged; business is all that can be expected, in view of the depressed condition of the Iron trade. Blast-furnace Coke remains urchanged at \$1 \$\text{ fon, free on cars at}

(Special Dispatch to The Iron Age.) PITTSBURGH, PA., November 14, 1888.

The meeting of the Western Nail Asso The meeting of the Western Nail Asso-ciation in this city to-day was very largely attended, all sections of the West being represented. After careful consideration of the situation it was unanimously agreed to stop all Nail machines in the West on December 22, the stoppage to continue until February 4. These dates were fixed as they cover the close of the fall trade and of orders; desirable lots can be had at the While it is admitted on all hands that the spring of the opening of the spring eneral Iron trade is far from being satistical. This indicates a determination on the part of the Western Nail Association to control their prices and product. The Rolling Mill and Nail Factory of the Norton Iron Works, at Ashland, Ky., burned down last night. This mill has 94 Nail machines and 20 single puddling furnaces.

CHICAGO.

Office of The Iron Age, 36 and 38 Clark St., Cor. Lake St., Chicago, Nov. 12, 1283.

Hardware —The season being somewhat dvanced, it is not to be expected that trade should be as active as a month ago : conse uently, jobbers report a "little falling off in the demand during the past week, though a fairly good trade is doing. Some lines of goods are keeping up remarkably well—such s Door Locks, Sash Locks, Bolts, Butts, Screws, &c., in Builders' Hardware. There also quite a brisk demand for some aris also quite a brisk demand for some articles in Heavy Hardware, such as Shovels, Hammers, Chains, Spikes, Horse Nails and Blacksmiths' Tools, tog ther with Stove Goods and Hollow-ware. Up to this time there is not much complaint about the volume of goods sold, jobbers claiming that the bulk of shipments for the season equals that bulk of shipments for the season equals that of other years, if not more. Prices, they claim, continue unchanged and unremunerative on many of the different articles of merchandise handled by Hardware dealers.

Nails .- The condition of the Nail market | c is much the same as it was last week. There is no diminution in the demand, which, during the past week, is said to have come principally from direct consumption. sumers are buying with more than ordinary caution, none believing that Nails, at even the present low figures, have reached bottom.

Scrap, P net ton, \$17; Cast Scrap, P ton, the present low figures, have reached bottom.

\$15; No. 1 Stove Plate Scrap, P ton, \$9; We quote \$2.75, 2 %, 60 days, for carload lots, and \$2.80 for less quantities in a retail

Borings, \$6; Old Plows and Plow Steel, \$10;

American Pig Iron .- The Pig Iron mar-American Fig Fron.—The Fig fron market presents a brighter outlook. Whi'e the market cannot be considered brisk, or even buovant, there is an average business doing, and more than one would expect after reviewing the general conditions of the Iron interest. The fact is pretty generally conceded that Pig Iron has touched the lowest formers and Refined. The consumptions of the response weakness. Prices have declined from \$3.80 to \$3.70, under sales of some 700 tons Common and Refined. The consumptions that it will reach in this market and figures that it will reach in this market, and consumers are casting about preparatory to placing orders for their winter supply of Charcoal Iron. We hear of consumers of Coke and Anthracite Irons offering to buy their supply for 1884 at 50¢ P ton less than our quotations of to day without success, while another has attempted to buy Southern Iron, for delivery from February to June in 1884, at present cash prices with the same result. Furnacemen decline to accept present prices for anything but immediate deliv-ery, though they are weaker now than at any previous time during this season. many of the grades of iron there has been a decline of from 50¢ to \$1 ? ton during the week, which seems to be the result of the unsettled condition of the general trade, rather than the lack of activity, as there has been more Iron sold during the first 10 days of this month than the two weeks previous. We quote as follows for carload lots, 4 mos.: Lake Superior Charcoal, Nos. 1 and 2, \$22.50 Lake Superior Charcoal, Nos. 1 and 2, \$22.50 (@ \$23; No. 3 at \$23.50; No. 4 at \$25, and Nos. 5 and 6 at \$24; Lake Superior Coke at \$21 (@ \$22; Lake Superior and Ohio, mixed, at \$21; Ohio Standard Black Band, No. 1, \$23 (@ \$24; Southern, No. 1, at \$21, and No. 2 at \$20; Silvery Soft at \$10,50 (@ \$22; Anthracite, No. 1, at \$22, and No. 2 at \$21. For 100-ton lots, immediate Chicago delivery, the following cash prices are quoted by furnace sales agents:

by furnace	88.	lei	8 8	ag	30	16	ıt	8	1											
Briar Hill						,	٠.		,	6	. ,			×)	. ,		*			 \$22.00
Iron River.								٨	,			ĸ	. ,		*		. ,		*	 21.50
Himrod, No	. 1 .																		0	 21.56
Rockwood,	No.	3																۰		 19.50
Sloss Silver	V. OI	oei	n.					,						 		,				 19,50
Briar Hill 8	cote	h.												 			۰		 	 23,50
Deer Lake I	ron.	N	08	i.	1	8	n	d	15	8.			a						 	22,50
Fon du Lac																				22.00

Scotch Pig.-The marke for Scotch Pig is steady, but quiet. There is very little of any kind of foreign Iron used, and what is in hand is held firm, at the following quotations for cash: Coltness, \$29; Summerlee, \$28, and Glengarnock, \$28.

and Glengarnock, \$28.

Merchant Steel.—There is not much to be said about this market. There is some business doing on small orders—principally retail—but things are of a "blue Monday" appearance throughout the trade. The inferior brands, as they are termed, find preference with many of the consumers because they can be had for less money, and among jobbers of these grades cutting for competing trade is the order, which usually results disastrously to the profits of the jobber. This state of this extens the market for No. state of things keeps the market for No. 1

Steel very quiet, as the manufacturers are determined not to meet the prices at which the inferior grades are sold. We tinue our former quotations for the grades of established Steel as follows: grades of established steel as follows: Refined Cast Steel, 10½¢@11½¢淨B; Crucible Machinery, 6½¢@7¢; Bessemer and Open-hearth do., 4½¢@5¢; Steel Boiler Plate, 6¢@6¼¢.

Steel Rails .- The Steel Rail market con tinues very quiet. The recent decline at Eastern mills has not developed any demand. and the mills are running on the small orders that spring up from day to day. The Chicago Rolling Mill, a branch of the North Chicago Rolling Mill at South Chicago, closed on the 3d inst., for want of orders, but they continue to have enough to keep the other one running for the present. They quote \$37 @ \$38 to meet the decline in the East, but have not had any inquiries at the latter price, as railroads claim that a reduction of reight rates will be necessary if Rails are furnished at prices now prevailing, and are

Old Rails -The scarcity of Old Rails is being felt somewhat, and the market continue-firm at \$21 @ \$22. All that is offered are fairly taken, while there is more inquiry than usual at this time.

Bar Iron .- There is a fair demand for Bes Refined Iron, both from store and for ship ment. Some of the dealers report more sales in a day than can be made by their mills in the same length of time, while others are complaining that business is quiet. Orders Beyond this the customary concessions. narket is regarded as firm and more en couraging than was generally anticipated everal weeks ago.

Builders' Iron.-The demand for this lass of Iron has received a hard knock from the present cold snap, which makes outdoor work quite unpleasant and in part suspended. We continue our former qu tions, though the market is quiet and on the decline: Tank, 2.7¢; Angles, 2.9¢; Beams, 3.6¢, and Channels, 3.6¢ @ 3.8¢.

Galvanized Iron.—There is a fair demand for Galvanized Iron, and the better rades are firmly sustained at 45 and 5 % off Juniata, and 45 and 10 % off for Refined. with some concessions for special lots. Among the lower grades of Galvanized Iron there is much cutting, which has a disasthere is much cutting, which has a disastrous effect upon the market. Manufactuders of established brands are unwilling to meet the price of much of the Iron that is being put upon the market.

Black Sheets .- Black Sheets are in fair request in the lighter numbers, while there has been some improvement for the heavier grades. Prices in a retail way are fairly well sustained, but for large quantities con siderable cutting is in vogue among manu-facturers as well as dealers. We quote No. 24 at \$3.50, Nos. 25 and 26 at \$3.65, and No.

Scrap Iron.-The supply of Scrap is considerably more than the immediate requirements. Furnaces are not buying very liberally, but continue to quote \$18.50 @ \$19.

Chicago or Milwaukee delivery, for No. 1 Mill Scrap. The following prices are quoted as dealers' purchasing prices : No. 1 Wrought Malleable Scrap, \$5.

EVERETT & Post, 156 Lake street, Chi. refiners are sold ahead; consequently, stocks in the West are not accumulating. Still, there is enough Lead coming in to supply current requirements of consumers, and, unless some manipulation takes place, we de not look for any improvement until after the turn of the year.

CHATTANOOGA.

Office of The Iron Age, Market and 8th Sts., CHATTANOOGA, Nov. 12, 1883.

The weather during the week has been summerlike in its mildness, and closes with steady, though light, rain, which is needed to swell the streams. General trade continues in a healthy condition. The cotton crop is being pushed to market more rapidly than ever before, a result of our greatly improved railroad facilities. New Orleans has received many thousand bales this year in excess of her receipts to same date last year, and the same is true of all cotton-buying points. looks now as if the entire crop would be in second hands by Christmas. There will be second hands by Christmas. There will be more cotton than any of the estimates calculated, the "top crop" having been greatly enlarged by the favorable weather last month and this. Merchants throughout the month and this. Merchants throughout the section are sailing close, doing a safe

Pig Iron.—The market has been more or less affected in the better grades by the late cuts at Northern trade centers, but makers stubbornly refuse to concede any lower prices than we quote on small bills, and shade about \$1 12 ton for large lots. They will blow out before going down. We quote the same as last week, and note a rather duller same as last week, and note a rather duller trade. We quote No. 1 Foundry, \$19 @ \$20; No. 2 Foundry, \$18 @ \$19; Gray Forge, \$16 @ \$19; White and Mottled, \$14 @ \$15; Car-wheel Metal, \$24 @ \$26.

Ores.—We quote 50% Brown Hematite, ton, \$2 @ \$2.75; Red Fossil, \$2 @ \$2.25, delivered at furnace.

Miscellaneous Articles .- Old Rails are steady at \$21 @ \$22, with small stocks. Scraps, except No. I Wrought, are about off the market. Wrought Scrap, \$18 @ \$22; Cast Scrap, \$11 @ \$14; Old Wheels, nominal,

Nails .- We quote them fairly steady at \$2.70, 60 days, 2 % off for cash ; job lots 10¢ @ 15¢ higher.

Merchant Iron .- Bar is dull at \$2 for assorted bills; Bolts, \$3 @ \$3.20; Spikes, \$2.50; Splices, \$2.

Coal .- We quote Fancy Lump, \$3; Common, \$2.50; run of mine to manufacturers,

Coke.-We quote Furnace Coke, \$3 at oint of consumption; Foundry, 10¢ @ 12¢ bushel,

LOUISVILLE.

GEO. H. HULL & Co., Commission Merchants, report to us as follows, under date of Nov. 10, 1883: The market for Pig Iron is quiet and the sales for Hot Blast Iron continue good. Many of our foundries are full of work and consequently consuming a great deal of Iron. There is still a tendency on the part of buyers to want each lot of Iron lower than the last purchase, but furnaces are sold so far a read that they are declining to reduce prices, and the outlook is a little more favorable. As the stock of Iron in the country is being reduced about 20,000 tons per month, and prices are as low therefore inclined to delay rather than hurry their orders.

20,000 tons per month, and prices are as low as they ever were, we see no reason why Iron should go lower:

	Iron should go lower:		
is	FOUNDRY IRON.		
d	No. 1 Hanging Rock Charcoal No. 1 Southern Charcoal No. 1 Hanging Rock Stonecoal and	\$23.00 @ 21.00 @	
y it e	Coke. Coke. Southern Stonecoal and Coke. Southern Stonecoal and Coke. American Scotch. Open Silver Gray. Close Silver Gray.	19.50 @ 19.50 @ 18.50 @ 18.00 @ 17.50 @ 16.50 @	19.0 18.5 18.0
8 8 4 1 1 0 0	No. 1 Charcoal	19.00 @ 17.00 @ 16.50 @ 16.00 @ 15.00 @	17.00 17.00 16.50
0	Hanging Rock, Cold-blast	80,00 @. 28,00 @. 27.00 @. 26.50 @.	31.00 24.00 28.00 27.00

W. B. BELENAP & Co, Iron and Steel Merchants, Nos 115 to 121 West Main street, report to us as follows, under date of November, 10, 1383: Bar Lon is still much deed, and the very low prices at which it is offered fail to stimulate consumption to a degree that affords relief to the market. There can be little improvement now before the last of December, when, as mills slow down to take stock, they become indifferent about forcing their product on buyers, and January almost always betters matters by its regular demands. Confidence in prices has been much shaken by the gloomy reports from the East; \$35 ? ton for Steel kails does not augur well for other prices. The shrinkage of the past year or two has been most trying to the trade, and it is devoutly to be hoped that we have reached nearly, if not quite, the end. Hoops and Bands are dull. It is pretty generally understood that the Hoop mills have been much disappointed dull in the amount of business done this and a further decline is not unlikely. Iron.—Instead of improving as the season advances, the price has slowly declined on all gauges. The holders of stocks, tired of an unfortunate investment, have put lots upon the market, only to find that to realize prices must be materially cut. Nails. - As we said two weeks since, these are on a gentle declivity. Every now and then we hear strong assurances that bottom has been reached—that there can be no possible further shading of prices. But, in spite of the fact that stocks are very bare at mills and in jobbers' hands, there is a slow movement toward something lower. Wire.—The fact that Steel Rails are low, with no prospect of large demand, and that mills engaged in

rcelain,

Length of Blade ...



Star Hack Saw Price List.

..... 6 inch. 7 inch.

Price per Dozen Blades.... 55c. PRICE OF STEEL FRAMES PER DOZEN.

No. 1. Extension Frame, Polished and Nickel Plated, per Dozen \$9.60 2. Solid " Rough Nickeled,

These frames are all made of steel, and, as seen in the cut, are all adjustable so as to face the blade in four different directions. The extension frames will hold the four different lengths of blades. The solid frames only hold the 8-inch blades, this being the length most in use. They all have the patent staple-shaped pins to hold the blades in the frame, which are so

arranged that they cannot fall out.

As this Saw cuts almost everything, it will do most of the sawing required about a house, shop or farm. It is especially good for Retail Hardware Dealers to cut Chains and Bars of Iron and Steel. One blade, which costs 5 cents, will cut off half-inch round iron so times, and the same size untempered steel 40 times. These blades are all fully warranted, and may be returned at our cost if they do not prove better than any other kind in market. All genuine goods are marked with a star (*) and bear our name.

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ALL KINDS OF RIVETS.

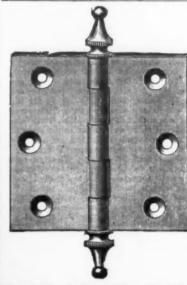
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Our Genuine Wrenches are made with straight bars, full width and enlarged jaw, having ribs cast inside, which strengthen the jaw and give a rull bearing on front of bar. These improvements, in combination with our new ferrule, made with double bearings, an iron rube, fitted to the shank and resting against the lower bearings, rigidly held in position by the handle and nut, effectually preventing back thrust of ferrule (see sectional view), verify our claim that we manufacture the heaviest and strongest Wrench in the market. None genuine unless stamped

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Has no Equal, Surpassing all others, and pronounced

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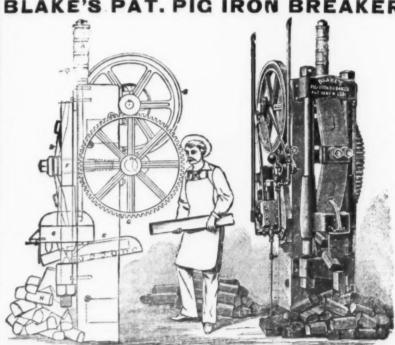
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A new and successful machine for breaking pig from into any length desired, with rapidity and economy. Besides saving in cost of breaking by hand, it secures the greatest economy in melting, several machines already in use. Every machine guaranteed against treakage of parts. Requires but three horse-power. Can be run by belt or have small engine attached. Send for Circulars, Prices, &c.

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their manufacture are also large makers of Wire, such as the Cleveland Rolling Mill and Cambria, leads to the belief that they will turn their energies to Wire, and can see no advance with a large product forced on the market. The volume of trade is large and collections fair. The clearings of Louisville show a handsome increase over last year. The net earnings of the Louisville and Nashville Railroad for the last three months are about \$600,000 greater

CINCINNATI.

NOVEMBER 12, 1883.-Pig Iron.-All the features of the market remain substantially as last reported. The supply is practically unchanged, consumers buying to meet the present demand and at former prices. The demand is reported mostly for very Soft and Silvery Hanging Rock kinds, for mix to reduce the shrinkage and hardness of the kinds from other districts. Quotations are

Hanging Rock Hot-Blast Charcoal Forge Charcoal..... onecoal.

No sales Scrap reported. NOTICE.

Office of E. L. HARPER & Co., & CINCINNATI, Nov. 7, 1883.

We take pleasure in announcing that we have been appointed sole sales agents for the Quinnimont Furnace, West Virginia. This Iron, as is well known by the many familiar with its merits, is in the fore-front of the Neutral Coke Irons, and is popular, not alone for its superior qualities in strength and softness, but because of its uniformity of It is pre-eminently a reliable fron. We have a limited amount Foundry Iron. of Nos. 1 and 2 Foundry on hand. Soliciting your esteemed inquiries for prices, yours very truly, E. L. Harper & Co.

ST. LOUIS.

HOFFER & Co., Pig Iron and Iron Ore Merchants, 214 Pine street, report to us as herenauts, 214 Fine Street, report to as as follows, under date of Nov. 10, 1833: We have to report a quiet Pig Iron market, with prices unchanged. We quote: BOT BLAST CHARCOAL IRONS.

Southern	.00
	.00
Ohio 24.00 @ 30	
COAL AND CORE IRONS.	
Missuri 19.50 @ 20	
Southern 18.50 @ 19	
Ohio 21.00 @ 22	.00
MILL IRONS.	
Red-short 18.50 @ 19	
Neutral 17.00 @ 18	.00
CAR WHEEL AND MALLEABLE IRONS.	
Missouri	

BALTIMORE.

W. N. WYETH, Iron and Steel Merchant, 46 and 48 South Charles street, reports us the following, under date of Nov. 12, 1883: Trade for the past week ruled much the same as last reported. Values are depressed and undersold at annexed figures:

and undersoid at annexed figures:

Ref. Bar Iron, 1 to 6 x 3\(\) to 1... \(\) \(\) 2 1-10 (0 2 2-10\(\) \(\) 1 to 4\(\) x 11\(\) to 1... \(\) \(\) 2 1-10 (0 2 2-10\(\) \(\) 2 1-10 (0 2 2-10\(\) \(\) 2 1-10 (0 2 2-10\(\) \(\) 3 2 1-10 (0 2 2-10\(\) 4 (0 2 2-10\(

RICHMOND.

ASA SNYDER, Iron Merchant and Furnace Agent, writes as follows, under date of November 12, 1883: Current prices for last week are the basis for present sales. The Iron market is dull, and it is believed that some of our largest furnaces will blow out until consumption takes up with the supply now on hand. Prices as follows:

NO. 1 19	coten r	JE JE	on				 323,00	CO.	200, UNU
No. 1 A	nthraci	te Pi	g Iro	D			 22.00	(B)	29,50
No. 2	8.6		66				 20.00	60	23,00
No. 8	8.6		40					60	22,00
No. 1 V	irginia	Coke	Pig !	Iron			 20,00	0	21.00
No. 2	20	64	6.1					@	19,50
No. 1	6.6	6.6	Mill	Pig	Iro	n.	 16,50		18.50
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Mule	0.0	6.0		0.0			 5,00	60	

Our English Letter.

Review of the British Iron, Steel, Metal and Hardware Trades.

(From Our Regular Correspondent) LONDON, ENG., Oct. 29, 1883. THE INACTIVITY

noted in several of my recent contributions to your pages is in most instances unrelieved, while in a few other cases the preparation of season goods appears to have had a tendency to impart a slight fillip to the branches concerned. Taking matters as a whole, how-ever, I am disposed to believe that the quietude is general, with here and there an accentuation of lethargy, but with a heavy aggregate amount of business actually in course of being executed. Competition in most departments is very keen, and the number of firms is ever on the increase, while backbone in the trade, and there will soon be the substitution of machinery for hand labor no alternative but a futher limitation of the has enormously enlarged the production. Consequently, there is not only a larger on a ternative out a futner limitation of the Consequently, there is not only a larger on quentity of any given article on sale, but there are more venders, so that it is not at all surprising that values should be kept down and the rivalry of producers intensified. This is especially true of the substitution of machinery for hand labor on the substitution of machinery for hand labor on the manual form. Lower wages are talked of all round. Bolckow Vaughans are likely to stop a rail mill unless the men meet their views on the wages quently of the Cornwall ores had been given to Ethelbert Watts, of Philadelphia. In Hematite pios

IN Hematite pios

The tower wages are talked of all round. Bolckow Vaughans are likely to stop a rail mill unless the men meet their views on the wages question.

IN HEMATITE PIOS

This was true as regards that market, but put being discounted by the absence of new orders, especially for shipbuilding sorts. The Sheffield armor-plate mills are very busy, and sales of crude iron output. Elsewhere all classes agency of the Cornwall ores had been given to Ethelbert Watts, of Philadelphia. This was true as regards that market, but Panic was true as regards that market, but Panic was true as regards agency of the Cornwall ores had been given to Ethelbert Watts, of Philadelphia. Elsewhere all classes, 16 into iron output. Elsewhere all classes agency of the Cornwall ores had been given to Ethelber

almost all kinds of hardware and knickknacks, in which the home manufacturers have to meet the French, Belgian and German houses on ground which is predis-posed in favor of the Continental articles whenever fine art is in question. It is very singular that the French, with all their undoubted skill and taste in the manufacture of bronzes, clocks and certain other goods, do not progress in the same proportion as do the Germans or Belgians. It may be that than for the corresponding period last year. the French are neither colonizers nor developers of export trade—indeed, facts and figures serve to support the latter conten-tion. The French do a considerable export business, I am very well aware, but I am not the less well aware that, instead of sending drummers around advertising and otherwise pushing business, the majority of French manufacturers are content to let orders find them as best they may. That being so, one need not wonder that the French art-bronze manufacturers complain that they are forestalled and undersold by the Ger-mans in various neutral markets, including the leading cities of the United States. The fact is, I believe, that the Germans are taking the lead in some branches of art manufactures wherein Paris was once supreme—a circumstance which serves to add fuel to the 19.50 @ 21.00
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20.00 @ 20. or other markets for export trade. At the same time I should state that the French Government is endeavoring to stir up the manufacturers by issuing a series of more or less valuable reports from the French consuls in different parts of the world. In doing this the French are imitating the lead of Great Britain, the United States, Belgium and Germany. Each of these governments is now issuing ponderous volumes of reports from pretty nearly every known place under the sun, so that if the world be not fully exploited in the course of the next few years it will not be for want of consular literature. Yet I think one may safely say that very much of this information is of scarcely any service to practical men of business. On the whole, I think your own consular corps is the most serviceably handled of all-in relation to commerce, at all events.

THE IRON MARKET

has been quiet, and in some branches dull, since the issue of my last report—indeed, the trade, as a whole, must be presumed to be in a comparatively lifeless condition. In the a comparatively lifeless condition. In the open markets the amount of business current is very limited, while selling prices are depressed by the persistent efforts of the "bears," in whose favor is the general tendency of the time being. There is still a very considerable production at the various furnaces and works, and our export trade is naces and works, and our export trade is fairly maintained by means of low selling values; yet it seems beyond question that a further period of depression is immediately before us, unless some now entirely unsuspected revival should at once set in. whole, it would appear to be a fact that the 25,00 @ 25,00 28.00 @ 32.00 production of certain grades of pig iron is speculate on a scale likely to affect the ments of the market, and it is suspected that course of the market. Warrants stood at a the same remark is now, or will shortly be, applicable to several of the manufacturediron branches. That being so, and other points being taken into consideration, it is not easy to share the views of those who look out for an advance in prices, unless as a contingency arising out of the coal miners' agitation for higher wages. That agitation is gradually assuming a more tangible shape, and has at length proceeded so far that the date last year. In Connal's stores the quan-men, it is understood, will give one month's tity of pig iron is 589,098 tons (a decrease of notice for the extra 15 %, either to-day or on Monday next. The colliery owners of the whole of the Midlands met during last week, and resolutely confirmed their pr ous decision not to grant any advance. decision was not shaken by the arguments of the men's representatives at a joint interview held at Sheffield—indeed, the employers declared their utter inability to make the cassion. As an instance of the unprofitable nature of the coal trade lately, Mr. George Wilson, chairman of Charles Cammel & Co., Limited stated that the Oaks collieries, owned by his company, had not yielded a profit of more than 2 % for some time past. Other proprietors could no doubt give a similarly unfavorable being quiet. Quotations for makers' iron are lower, in sympathy with warrants. The warrant market here opened flat on Monday, the price dropping from 45/5 to 45/1½, cash. On Tuesday the price rallied from account of their recent operations. Should the threatened strike actually take place, however, a vast amount of harm may be done to the iron trade of this country. At Glasgow the warrant market has been very dull and weak, on the sales of large holders and the continued predominance of "bear" operators. Prices have been down to 45/1 during the week and closed at 44/11 to. Scotch makers' brands of pig iron have also declined by 64 50 1/32 to 18. Scotch makers' brands of pig iron have also declined by 6d. to 1/ ? ton, notwithstanding the better return of shipments last week, and the fact that there are 10 fewer furnaces working than at the same date last year. The reserve stocks are very large, and there is a suspicion that some of the makers have heavy quantities in their iron yards; consequently, values are weak all round, and there is little or no disposition to

> At Middlesboro' matters are again without No. 3 pig. Shipments are on a moderate scale only, but stocks are said to be decreasing, in the official stores, at all events, so that the local consumption must be heavy or the make smaller. Prospects are poor, pager. animation, and quotations are irregularly depressed on the basis of 38/6 @ 38/9 for no life whatever. Mixed lots are quoted at money. For next year's deliveries fair contracts have been entered into, but there is no

and have orders on hand sufficient to provide full work for a very long time ahead. boiler plates there is a steady call, and the producers of chain and cable iron are satisfactorily engaged. Fencing wire is only in moderate request, notwithstanding the re-cent reduction in prices, but I hear of two or three respectable orders having been booked for South America, &c., as well as for wire neiting on Australian account. Galvanized iron is quiet, so far as new orders are con-cerned. Swedish hammered bars are £11. 5/ @ £11. 10/, with special quotations for large quantities to arrive, and railroads £8. 5/@ £8. 15/ \$\mathbb{P}\$ ton. In merchant iron the week has been featureless, comparatively speaking, although some of the market reports speak of an improvement. If such a movement really exists, the trade, as a whole, is to be congratulated, but I am inclined to doubt its reality in the face of the reports of those competent to deal with the sub-Prices remain as before, with a fairly brisk call for sheets, but no activity worthy of mention in any other kind of rolled iron. The announcement of the probrolled iron. The announcement of the probable reorganization of the tube trade has created a good deal of interest, and has brought in a number of Continental, &c., inquiries. Concurrently, however, I have seen various "cutting" quotations which ranged up to 7½ or even 10 % below the association's prices. In iron rails there is no new business. Of old rails further sales are reported on Italian account, but business is restricted by light stocks in business is restricted by light stocks in dealers' hands and by the firmness of the railway companies who have these materials on hand. D. H. are nominally 65/ @ 67/, fo.b. Loudon. In heavy wrought scrap very little is being done, and prices are nominal at 55/, f.o.b. London. Freights are about the same, namely, 5/ @ 6/ for pig iron by ordinary steamers from Glasgow to New York, and 10/ for rails, &c., from Bris New York, and 10/12r rails, &c., from Bris-tol Channel ports or Barrow to the same or equal destination. Liverpool rates are a trifle firmer in some instances. Steel is dull and without material change. The Bessemer concerns are fairly busy and the Siemens works well engaged. Beseemer steel wire (Nettlefolds') is now 12/9 P cwt. for o to 6, 13/3 for 7, and other gauges pro rata. The same brand of best crucible steel wire is same brand of best crucible steel wire is 5d. % Ib for o to 6, 5¼d. for 7, and so on. O'd railway leaf-spring steel is easier at 73/6, c.i.f. New York, but nominal. There is a good demand for double sawn D. H. and B. H. crop ends, 16 to 40 inches long, for present to forward delivery, and supplies are scarce. Remelting crops are scarce. supplies are scarce. Remelting crops are not inquired about. Steel rails are very dull at about late rates (£4. 15/@ £5 ?) ton, ordinary flange sections of 50 pounds and upward), with scarcely any new business in the market. The production of these articles is not unlikely to undergo severe contraction before long. It is a rather significant circumstance that an order for 9000 tons of rails for Italy has been taken by a German works at a very low price, namely, equal to £4. 18/ 🔁 ton, delivered.

SCOTCH PIG IRON

is extremely flat, with a very small turnover in warrants, a fall in values below the lowest trifle over 45/ all last week, and finished up at 44/11, whereas a year ago the price was 50/9, with a large production, more furnaces going, and heavier reserve stocks than now. Makers' brands are all easier, despite good shipments, of which 2000 odd tons went to the United States last week. There are now 105 furnaces (of which eight on hema-tites) at work in Scotland, against 113 this date last year. In Connal's stores the quan-240 tons last week), as compared with 619, 480 tons last year same date. To date Scotch shipments have been 533,864 tons, or 8963 tons beyond last year to same date, while importations of Middlesboro' pig iron into Scotland have increased by 26,568 tons on a total of 218,160 tons this year. Writing from Glasgow on October 26, James Watson & Co. said: "The Scotch iron market has again receded in price, owing to an absence of confidence in the future and the demand being quiet. Quotations for makers' iron

							No. 1.	No. 8
	Glasgov	V		 		 0.0	47/	45/
Clyde,	0.5			 			49/	47/
Coltness.	6.6			 		 	57/	51/4
Langloan,	0.0			 			57/	51/9
Gartsberrie,	6.5						54/6	51/
Summerlee,	0.0						56/	50/
Calder.	6.6						56/6	48/6
Carnbroe,	6.6						54/	48/2
Glengarnock,	at Ard						54/	47/
Eglinton.		5.5					47/6	44/0
Dalmellington	1.	8.6					48/	47/
Shotts, at Lei							157/	58/6
Kinneil, at Bo							48/	46/6
Carron, at Gr							48/6	47/6
**	EDDE BOT	NO.	n	-	-	wn	CO.N.	

theless, and there seems to be no like-lihood of any early change for the better. The same remark applies with equal force to the hematite pig-iron market, in which there is rates known for many years in this branch. G.M.B., f.o.b. at makers' wharves in the

4 Forge. . Lower wages are talked of all round. Bolckow-

transacted. A few sales for next year's transacted. A few sales for next year's home deliveries are spoken about, but prices are kept private, which leads other persons to infer that excessively low figures have been accepted. Open quotations for mixed parcels in usual proportions stand at 48/@48/6, and makers' brands of West Coast pigs are :

		No. 2. No. 8.
Cleator		50/6 50/
Lonsdale		49/ 48/
Workington	49/6	49/ 48/
lowther	49/6	49/ 48/
Distington		49/ 48/
Harrington	50/6	49/6 48/6
lolway	49/6	49/ 48/
Maryport	49/6	49/ 48/
Last week's sh	ipments included	8461 tons

hematite pig iron and 3573 tons steel rails.

TIN PLATES are almost unchanged on the week, the slight diminution in the flow of orders being at-tributable to the firmness of makers, and not owing to any decrease in the demand. As a owing to any decrease in the demand. As a matter of fact, the call for wasters is still very lively, coke tins of this grade being freely sold at 15/6 for 14 x 10 and 14 x 20. As much as 15/9 is said to have been paid. A few second-hand lots of I. C. cokes have been sold at 16/ @ 16/6, but makers ask 16/6 @ 17/, and will not book orders at less than 16/6. In charcoals rather more is being done at 18/@ 20/ for I. C., and 18/6 for half-cross specifications. For best coke tins 17/@ 17/6 I. C. are quotations. Ternes are quiet (makers being steadily engaged) at 16/@ 17/ for I. C., and 33/@ 34/ for the large sizes. On the whole this trade is amazingly steady and seems likely to reach a brisk winter prosperity.

FOREIGN.

(Moniteur des Interets Materiels.)

-Paris, October 29, 1853.—Metals.—Business continues picking up by degrees, with a better demand for metals and an advance in Copper and Lead. We quote at the close, in francs, \$50 kg.: Copper.—Chili Bars, 160 @ 162.50; Ingots and Shabs, 167.50; Tins.—Banca, 254; Billiton and English, 250, and Straits and Australian, 252. Lead, 30.50 @ 31.50, and Straits and Australian, 252. Lead, 30.50 @ 31.50, and Spelter, 40 @ 40.50, Iron.—There has been quite an improvement in this city, raising the price of Merchant to 18 francs. We quote Charcoal Iron, 21; Sheets, 23 @ 36, and Wire Nails, No. 18, in bulk, 27. At the North Merchant and Flooring sell at 17, Corners at 18.50 and Sheets at 30.50 @ 34. A most favorable change has occurred there all of a sudden. Some makers, before it took place, had sold to arrive at low prices all the way into 1855. In the Haute-Marne the situation is also quite satisfactory, Coke Merchant bringing 18.50. Large contracts for delivery next year have been made by the blast furnaces of the Meurthe and Moselle in Puddling Pig during the week, to the value of some 10.000 tons, all told. Two-thirds of their 1884 output is now disposed of beforehand, all engaged by the rolling mills there. The price is supposed to have been 5.70, and the tendency is, if anything, upward for minor lots. Quite a demand is noticeable for rolling-mill products, but the foundries in the Basin complain of a lack of orders. No. 8 Puddling Pig seeling there at 7 francs. At 8k. Ettenne large commands have dropped in to furnish the three leading railroads with material. The South is about the only duil region in France just now in the Iron and metal trades. At Marseilles both Copper and Tin are quite weak. Coal.—The greatest activity prevails, in this city in particular, both for industrial and domestic. FRANCE (Moniteur des Interets Materiels.)

(Moniteur Industriel.)

(Moniteur Industriel.)

Brussels, October 30, 1883.—Iron.—Blast furnaces turning out Puddling Pig are quite busy, whereas those making Foundry Pig have to shade their figures if they want to secure fresh orders. As for the rolling mills, they have a rather improved call for smaller articles in their line, whereas, on the whole, they are not busy enough to warrant any better prices than the current ones. With respect to Structural Iron works, it may be stated that the majority of them might be more heavily engaged than they are, but this lack of activity is due to the season. We quote English Pig, in francs, \$100 kg., 5.70; Charleroi do., 7; Luxembourg, 5.80 @ 5.90; Puddling is firm at Charleroi at 4.50 @ 5.50, as to quality; Athus-Halansy is steady at 4.90 @ 5; No. 1 Merchant is firm at 18.50; No. 2 less so at 18.50, and No. 3 at 14.50; Beams are tolerably well sustainen at 13, and Corners at 13.50; Sheets may be quoted 17 for No. 2, and 19 for No. 3; Commercial, 23; Thin, 25, and No. 4, 27. From Liege we are reported to the following effect: "While the Iron situation is the reverse of brilliant, Spelter, on the contrary, is looking up. Coal.—Although the Coalmining companies complain that the demand for Coal for Coke, as well as for Small Coal, is not up to expectations, it cannot be denied that the general Coal movement in Belgium so far this year is quite satisfactory, and that during the past forting the following difference of the past forting the past fortin night the Government railroads are conveying Coal n excess of what they did last year.

GERMANY.

(Cologne Gazette.)

Dusseldorf, Nov. 1, 1883.—Iron.—The resumption of adjudications on behalf of Government railroad lines begins to spread some animation in material in Rhenish Westphalia. Meanwhile Boller Iron is less active. We quote in this city: Spiegel, 63: White Pig. prime. 55: Luxembourg. 40: Charten St. White Pig. prime. 55: Luxembourg. 40: Charten St. White Pig. prime. 55: Luxembourg. 40: Charten St. March Ma Iron is less active. We quote in this city: Spiegel, 63; White Pig, prime, 85; Luxembourg, 40; Charcoal, 76 & 82; Foundry Nos. 3 to 1, 59 @ 72; Spanish., 79; English No. 3, 61; ditto Bessemer at place of shipment, 49; Spanish at Rotterdam, 58.56, and German Bessemer, 57.50; Merchant, 130 @ 150, and Sheets, 170 @ 190. From Breslau we receive the ensuing intelligence with reference to the Upper Silesian Iron market: "There is a confident tone and increasing firmness in this district. The acquisition of the Thomas-Glichrist process has been a great thing for both the Konigshutte and the Laurahutte; both very busy, with large raifroad material orders in prospect. Merchant Iron is firm at 12.75; Puddling Pig steady at 5.50; week's production, 153,500 cwts. Sheets wanted at 18 @ 20.50 marks, all § 100 kg. Coal active and freight cars scarce, as usual. Spelter firm; Silesian Union at 294 marks § ton; weekly production, 50,000 cwts. Sinc Dust quiet at 13.75 marks, with cask, here. Cadmium firm, Prime 99% s, in rods, 9.75 @ 10 marks § kg. here."

AUSTRIA.

(Austrian Trade Journal.)

(Austrian Trade Journal.)

VIENNA, Oct. 28, 1883.—Iron.—The demand for both Pig and Finished romains as lively as ever, causing prices to show a remarkable degree of firmness. The demand for Pig is in excess of the supply; for near delivery good brands cannot be had, and even distant futures cannot be easily secured. Should this demand continue a little longer, German and English Pig will have to be imported on a larger scale. Thus the entire product of the Schwechat blast furnaces in 1824 has been sold beforehand. But we repeat that all this refers to good brands only; inferior ones are abundant, now and prospectively. Merchant Iron sells steadily in large amounts, and so do Sheets, Beams and all Steel manufactures. We quote, on a firm market, Pig, 51 @ 60 florins \$\(\frac{1}{2}\) ton; Merchant, 115 @ 134; Sheets, 175 @ 198, and Beams, 140 @ 145. Metals have been irregular; Copper weaker; Tin tolerably steady; Spelter quiet; Lead meglected, and Antimony and Quicksliver unaltered.

The Cornwall Ore Sales Agency.-In our issue of last week we stated that the

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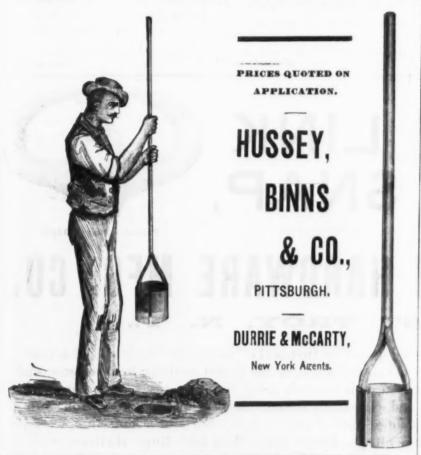
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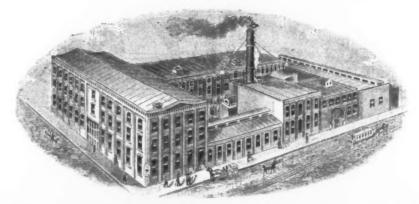
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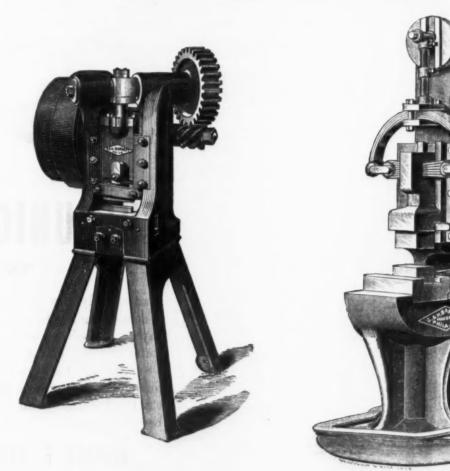
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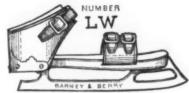
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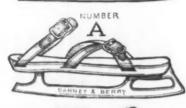














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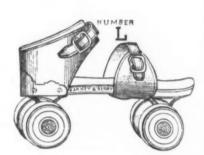


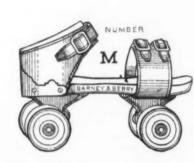












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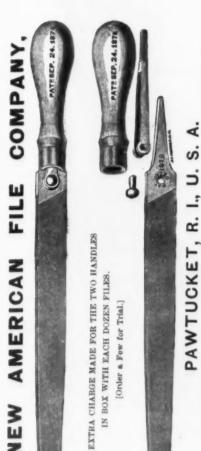
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CHARGES TO IRON WORKS. For determining the per cent. of Pure Iron in an ordinary Ore. nt. of Pure Iron, Sulphur and

depend upon circumstances.

For determining the per cent. of Sulpnur or Phospiorus in 1700 or steel.

For each additional constituent of usual ec-

currence...
For the per cent. of Carbonate of Lime, and insoluble Silicious Matter in a Limestone... For determining the constituents of a Clay, Slag, Coke, or of an Ash in Coal the charges will correspond with those for the constituents of an ore, For a written opinion or letter of instruction the charge must necessarily depend upon circumstance.

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Wholesale Hardware Prices, November 14, 1883.

HARDWARE.
A relis. Fazie Anvils American. Wright's. Armitage's Mouse Hole. Armitage's Mouse Hole (extra quality). Frenton Wightson's. J& Riley Carr. Patent Solid. Anvil "hee and Prili. Millers Falls Co. \$18.00. Chency Anvil and Vise. dis 234 % Chency Anvil and Vise. dis 234 %
Armitiage 10/9C Witchson's 10/9C Witchson's 10/9C J & Riley Carr. Patent Solid 11 © 11/4C Auxil **Ine and Drill Millers Palls Co. #8.800 dis 20 % Chency Anvil and Vise dis 23 % Augers and Bits. Conn. Valley Mig. Co. Humphreysville Mig. Co. Buecher (French, Swift & Co. dis 60 % From list of oriswold Nobles Mig. Co. Solid Mig. Co. Jan. 7, 1880. Solid Mig. Co. Jan. 7, 1880.
Douglass Mig. Co. Extra. Cook's Dougla s Mig. Co. dis 40% 10% 10% 10% 10% 10% 10% 10% 10% 10% 1
Exonisive Augers. Eves. 47 and 3.0. (dis 25 % Hollow Augers. French, Swift & Co. (dis 25 % Hollow Augers, Douglass) 2.5 % Hollow Augers, Douglass) 2.5 % Hollow Augers, Stearn's Adjust, \$\psi\$ dis \$25 \cdot 40 \
A W: Flatts. Sewing, Brass Ferruie
Holts of costs of the costs of
Single Bit, 4% to Sand Over
A sie ** France. A sie ** France. Prazer*, in boxes ** # gross \$to onet A sie ** Standard list
Bals nees
Daire Dair
Lever Carlette
Cow, Kentucky "Star"
Riacksmiths Commondis 45 f. Biacksmiths Extra Pittsburgh Patterndis 25 f. Moiders dis 25 f. Hand Bellowsdis 25 f. Bestings Mabber Belting and Packing Codis 40 f.
Extension, Barber's
\$12.00 10.0 0.0 \$.00 \$.00 \$.00 \$.0.2 \$.50 \$.50 \$.50 \$.50 \$.50 \$.50 \$.50 \$.50
Bar bed % in. **Bieck** **Pennfeld Block Co., W. I. C. bushed
Stanley Rules & Level Square, &c
urringe and Tire, rhusde/buly Fattern
Stove, R. B. & W. Co. dis 50 S.
Pinilipa with Augers
Peck, Slow & W.
Bull Rine = dis s. 5

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Buttas Wrought Prass Wrought Prass Wrought Prass Cast Brass Fighout's Cast Brass Forbin's Fast Joint dis 20% 5 Cast Brass Corbin's Fast Joint dis 20% 5 Cast Brass Loose Joint dis 10% 50% 5 Fast Joint Agrow dis 46% 50% 5 Fast Joint Narrow dis 46% 50% 5 Fast Joint Fast Joint Code Joint Gast Gast Gast Gast Gast Gast Gast Gas	Lea Br D To Gr Re W
Loose Pin, Acorns, Japanned. dis 60&10 \$ Loose Pin, Acorns, Japanned. Plared Tips. dis 60&10 \$ Fast Joint, Narrow. dis 50&10 \$ Fast Joint, Narrow. dis 50&10 \$ Fast Joint, Broad. dis 50&10 \$ Loose Joint, Broad. dis 50&10 \$ Loose Joint, Broad. dis 50&10 \$ Loose Pin, Wrt. dis 50&10 \$ Loose Pin, Wrt. dis 50&10 \$ Loose Pin, Light, dis 50&1	Sa Sa Sa Pl Co Rt Ho
Spring Hinges: dis 30 % Sabin Mfg. Co. 'a Double Acting dis 45 % Union Spring and Blank Butts dis 45 % Union Spring Hinge Co. 's dis 25 % Union Spring Hinge Co. 's dis 25 % American Spring Hinge Co. 's dis 25 % Gem Spring Hinges dis 30 % Barker's Double Acting dis 30 % Barker's Double Acting dis 25 % Union Mfg. Co dis 25 % Buckman's dis 25 % Buckman's dis 25 % Buckman's dis 25 % Buckman's dis 25 % Burkman's dis	Cr Mi Ni Br Ad W De Bl Bl
Inside Blind, Light	Bi Bi Bi Ri
Bind Butts, Shepard's "Noisciess," Nos. 40, 60, 65, 45 and 55 and 65 and	M M M M M M M M M M M M M M M M M M M
American	7 RSE W
"Worlds Best" # gross, No. 1. \$12.00; No. 4, \$24.00; No. 3, \$30.00	B DBW
	MOLLINST J.
Cartividges	BHHXXUEBRA
Hotchkissdis 25 5	1 6
Peck. Stow & W. Co	SCCB BPP
Socket Framing, Arington & dge Tool Co. Socket Framing, Merrili Socket Framing, Merrili Socket Framing, Witherby Tool Co. Socket Firmers, Arlivgton Edge Tool Co. dds. 70 @ 70 Socket Firmers, Witherby Tool Co. Socket Firmers, Witherby Tool Co. Socket Firmers, Witherby Tool Co. Socket Framing and Firmer Buck Bros	NA MA
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Tanged Firmers, Spear & Jackson's.	SR DDDDDDD
Wilson's	OUU CHHHAMAMAY
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Total Steel Pints	BR St

or	Wholesale Metal Prices See Page	1
2	D'viderssee Compasses Dog Collars.—Embossed Gittdis socto \$ Leatherdis socto \$. dis	
8 %		
200	Door Springs	
W 95 ×	Ree Rod	
26 54.0	No. 1, Large Japanned doz \$1.00 No 2, Medium, Japanned doz 2.75 dis 50 & 10 %	
W 19. 19.	No. 3, Small, Japanned & doz 2,00) 'tar (Coll) — For Cop'd, Nickel-Plated &c., see list. No.4("Shoo Fly") Screen door size, & doz \$1,50)	
9.8	No. 5, Screen Door size	
78.87	Sabin's Lever No. 1, \$1; 2, \$1.50; 3, \$2; 4, \$2.50.dis 35 % Sabin's Boss. No. 1, \$2 doz. \$4.00; 2 \$2.75; 3, \$2.dis 33\5%	
5000	Name Section	
94.94	Rubber, complete # doz. \$2.25, dis 20&10 % Hercules	
%	Hubber Complete # doz. \$2.25, dis zocto % Hercules dis sof	1
56 56	Nobles Mfg. Co	ŀ
828 80		
N 54 54)	Blacksmiths'each, \$2.50, dis 20 %	1
N 50 W	Drill Stocks Elacksmiths each, \$2.50, dis 20 5 Elacksmiths each, \$5.50, dis 20 5 Elacksmiths each, \$5.50, dis 20 5 Elacksmiths each, \$5.50, dis 20 5 Ereast, Hotchkiss dis 20 5 Ereast, Hotchkiss dis 20 5 Ereast, Milers Falls each, \$5.00, dis 25 Ereast, Elacksmiths each, \$5.00, dis 25 Ereast Earth-loanew's each, \$5.00, dis 20 5 Earth-loanew's each, \$5.00, dis 20 5 Earth-loanew's each, \$5.00, dis 20 5 Earth-loanew's dis 20 5 Earth-loanew	1
1 × 3	Breast, Millers Falls each, \$3 co, dis 25 %	-
N 96 95	Ratchet, Merrill's	1
N W P	Ratchet, Whitney's	-
18 90	Whitney's Hand Drill, Plain, \$11.00 Adjustable,	1
76	\$12.00.	-
K 08	Morse's Beach Patenteach \$8.00, dis 20 % Morse's Adjustableeach, \$7.00, dis 20 % Danburyeach	
100	Noman was a second	1
7.	1 10 10 10 10 10 10 10	1
%	Family (T. & S. Mfg. Co.)	
eg.	Elevator Buckets. Mill E. Buckets, light. 3% to 10 in. (Due's Improved).	1
5. 3	Acme frumpn (T. & S. Mfg. Co.) # gross, \$12.00, dis 21.5 frumpn (T. & S. Mfg. Co.) # gross, \$12.00, dis 21.5 flevitor Buckets. Mill E. fluckets, light, 3% to 10 in. (Duc's Improved), # 100, \$13.00 \$1.00. Mill E. buckets, heavy 5 to 10 in. (Duc's Improved), # doz. & 6-4 \$1.00. Storehouse (Duc's Patent), 12 to 17, \$12 @ \$20 dis 10 % Emery.	-
28.38	Rogular numbers	1
* * *	For Emery Paper and Cloth see Sand Paper.	-
% %	the concentration of the contration of the contr	
%	Sauce Pars dis 3c % inned Sauce Pans dis 3o % Excutcheon Pins dis 5o %	
为其实	h mout ob mone	1
%	Door Lock Same discounts as Door Locks Brass Thread dis 55 Wood dis 25 % L'aucets.	-
, in	Bohren's Patent Rubber Ball	-
1 Ing	frary's Patent Petroleum. dis 25&10 %	1
pad	Nauceta	
4	J. Sommer's Best Block Tin Key. dis 10&10 %	1
9	netalic key, Leather Lined	
×	Felioe Fintes	-
20 14	J. & Riley Carr new list April 1, '83, dis 15 % J. & Riley Carr Horse Rasps dis 10%	1
5 5 5	Felice Fractes Fract	1
×	New American	
* 5. %	Heller Bros. Horse Rasps	1
5 5	Western. 3618 o.5 \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	1
1 808	Knox, 6-inch Rolls	
×	Eagle, 53-inch Roll. 2.85, dis 35 % Crown, 45-in., \$3.50; 6-in., \$4.00; 8-in., \$6.50 each, dis 35 % Crown, fewel	1
* * *	American, 5-in., \$3; 6-in., \$3.40; 7-in., \$4.50 each, dis 35 % Domestic Fluter\$1,50 each, uet	
	Crown Hand Fluter, White Metal & doz \$12, dis 25 % Crown Hand Fluter, Nos. 1, \$15; 2, \$12.50; 3, \$10.00 \$\tilde{x}\$ doz	
2	Crown Hand Fluter, Nos. 1, \$15; 2, \$12.50; 5, \$10.00 \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ \$\frac{1}{2}\$ \$\frac{1}{2}\$ doz \$\frac{1}{2}\$ \$\fra	1
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19 99	Kinting Scimors dos \$10.00, dis 10 % Hinting Scimors dis 10 % Fig Traps.—Paragon & dos 20 as not	1
et	Hay, Manure and Spading	
et et	Popular Popu	
×	Fry Pans. Burnished list as follows. dis fortices 5	
P	Enterprise Mfg. Co	
70	Gauges. Marking Stanley's	
×	Cangess dis 40x10 S Cangess dis 50x10 S Marking Stanley's dis 50x10 S Marking Chapin's dis 50x10 S Wire dis 50x10 S Wire dis 50x10 S Wire Wheeler dis 20x10 S Wire Wheeler aadden & Co dis 10 S Canges dis 10	1
N. N. S	Wire, Wheeler, hadden & Codis 10 % 4-imlets Nail and Spikedis 40&10 %	1
200	1 1 1 1 1 1 1 1 1 1	1
50.0	Double Cut, Hartwell's	1
**	"Bee"	1
大大変	Tinned and Enameled dis 334 5 Family, Howe's "Eureka" dis 425 Family L. K. & C's "Handy"	1
% %	(i. 10 Pots. Tinned and Enameled Tinned and Enameled Tamily, Howe's "Eureka" dis 42 5 Family, L. F. & C. " "Handy " dis 42 5 Grindstone Fixtures Sargents Patent. dis 70 50 5 Reading Hardware Co. dis 900 5 Grindstone Matter Co. dis 900 5	1
5 5	Mading Hardware Co. Gls 30x10 % Mading Hardware Co. S2.00 Cl. M. C. B. E., 11 UD S2.00 Cl. M. C. B. E., 96x10. 2.50 Cl. M. C. P. E., 768 2.50 Cl. M. C. P. E., 11 UD 3.10 Cl. M. C. P. E., 12 UD 3.10 Cl. M. C. P. E., 96x10. 400 Cl. M. C. P. E., 788 4.90 T. Rels *aws 8. 4.90	1
5	U. M. C. B. E., 9&16	-
×	U. M. C. P. E., 9&10	l
2	Hack *aws. Griffin's Hack Saws and Bladesdis zocio z Hatter.—covert's Pat. copedis coco Covert's Horse and Cattle Tiesdis coc Union Pat. Rope and Webdis jox jo Union Horse and Cattle Tiesdis jox jox zammersmayode'sdis jox jox Cheney's, new list, March, 1884dis zocc Hartford Hammer Coc Nai' Hommersdis zoc Hartford Macanist, Rivet.bg and Farrierdis zoc Hartford Macanist, Rivet.bg and Farrierdis zoc Hartford Macanist, Rivet.bg and Farrierdis zoc Humason & Beckleydis 15.	
4 54 36	Covert's Horse and Cattle Ties. dis 40 % Union Pat. Rope and Web dis 10 11 %	l
发发系	transmers — Maydole's	
76 M	Hartford Hammer Co 's Nai' Hammersdis 20 % Hartford Macainist, Riveting and Farrierdis 25 % Itumason & Beckley	
5	Verree. Magnetic Tack, Nos. 1, 2, 3, \$1.26, 1.50 and 1.7dis 25&10 \$	1
XXXXX	Humason & Beckley dis 1.5 Verriec dis 5.5 Magnetic Tack. Nos. 1, 2, \$1.20, 1.50 and 1.7. dis 2.821.5 Magnetic Tack. Nos. 1, 2, \$1.20, 1.50 and 1.7. dis 2.821.5 Melson Fool Works dis 6.821.5 Melson Fool Works dis 6.821.5 Verke & Plum dis 10.8 Wilkinson's Nmithe' is 50.8 Band CuBs and Let Frens Providence Tool Co., Land CuRs, \$1.50.0 doc. dis 10.8 Providence Tool Co., Leg Irons, \$2.50.0 doc. dis 10.8 dis 15.8 Good dis 10.8	1
XXX	wikinson's Smiths'	1
1%		
MANAMA	Nos o 1 2 3 4 Per dos \$0.80 1.00 1.18 1.35 1.50 dis bolt to \$	1
28.34.34	Nos	
c	Jan'd Store Door Handless-Nuts, \$1.62; Flate, \$1.14; no Plate, \$0.89. net Barn Door \$\psi \text{doz} \text{\$1.00}\$, dis to \$\psi\$ Wrought Crest. \$Cls \text{\$10}\$ Surface Chest \$\distance \text{\$10}\$ Flash Chest. \$\distance \text{\$10}\$	1
C MAN	Surface Chest Gis 50 % Surface Chest Gis 60 % 10 % Flush Chest Gis 70 % Lifting Gis 72 % Lifting Gis 72 % Chest Gis 70 %	1
%	Finan Chest	-
X X X X	Sign or any Hatchat 200 great any Hardhat 200 great any Hatchat 200 great any Hatchat 200 great as 200 great	-
K	Hickory Firmer Chisel, assorted, & gross . \$1.50 Hickory Firmer Chisel, large, & gross 500	

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8 %	Patent Auger, Douglass'	Co
W 140	#inngersdis 60&10 % Barn Door, old patternsdis 60&10 % Barn Door, New Englanddis 55&10 %	M
36 36 36	Barn Door, old patterns Barn Door, New England. dls 50&to 5 Barn Door, New England. dls 50&to 5 Climax (Anti-Friction). dls 50 Challenge. dls 50 Chamlenge. dls 50 Sterling Improved (Anti Friction).	M
F	Cheritree dis 50 % Kidde 's dis 50 % 5 %	CECE
	Kidde 's	CECCO
K	Harnesa Sinps. Auchor (T. & S. Mfg. Co.)	L
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N 24 49 8	Shingling, Nos. 1 2 3	
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188	Lathing. Nos. 1 2 3	
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××	Shingling, Nos. 12 3. # doz 8,5 0 86,00 86,50 Claw, Nos. 12 3. # doz 5,00 6,50 7,00 I athirg, Nos. 12 3. # doz 5,00 6,00 6,50 Peck's Champion Binde	D
東京な	shingling, Nos. 1 2 3	M
st st	Half, Nos. 1 2 3	A
×	Hay Anives. "Lightning"	B
* *	Gate, Western.	A
Be je	Manasworth	E
141		K
***	Rulled Plate	K
83	"Providence" over 12 in. \$4.50 \$ 100 b (dis 10 %) Screw Hook and (8. 10, 12 in. \$4.50 \$ 100 b (dis 10 %)	P
5 5 5	Color Colo	B
MMH	Screw Hook and Eye 34 in., 9c dis	L
気気気	Wrought Strap and Tdis 60&10&2 % @	88
気気を	Socket	80
XXX	1 sees. Riveted Shank \$\psi\$ dos \$\psi_{\cup 0.0}\$ dis \$\cup 5\$ Socket \$\psi\$ dos \$\psi_{\cup 0.0}\$ dis \$\cup 5\$ Socket \$\psi\$ dos \$\psi_{\cup 0.0}\$ so \$\psi\$ Pianters' dis \$\cup 5\$ Socwill Pattern dis \$\cup 5\$ Socwill Pattern dis \$\cup 5\$ fiandled Planters dis \$\cup 5\$ fiandled Planters dis \$\cup 5\$ fiandled Planters \$\cup 0.0\$ dos \$\psi_{\cup 0.0}\$	LVB
* *	Hind Come Commontia list	1
% 4	Bird Cage, Reading # dos \$4.0.4 (Ms o \$6.05 \) Bird Cage, Reading # dos \$4.0.4 (Ms o \$6.05 \) Cotton Patented (N. V. Mallet & Hand'e W. W.sh.)dis 9.5 (Cotton (Humason & Beckley Mfg. Co)	SHY
KKKK	Cotton (Humason & Bockley Mrg. Co) dis 30 ket. Bent. Hotchkins' \$4,00 dos. Weston is No. 18 ic.co: No. 2, \$6,00 \$\frac{3}{2}\$ dos. 10 \$\frac{3}{2}\$ Weston is No. 18 ic.co: No. 2, \$6,00 \$\frac{3}{2}\$ dos. dis 10 \$\frac{3}{2}\$ Weston is No. 10 ic.co: No. 2, \$6,00 \$\frac{3}{2}\$ dos. dis 10 \$\frac{3}{2}\$ Merfull's, \$2,00 \$\frac{3}{2}\$ dos. dis 10 \$\frac{3}{2}\$ Morrill's, \$6,00 \$\frac{3}{2}\$ dos. dis 10 \$\frac{3}{2}\$ Morrill's, \$6,00 \$\frac{3}{2}\$ dos. dis 10 \$\frac{3}{2}\$ Clothes Line, Sargent's list. dis 10 \$\frac{3}{2}\$ \$\	TH
* * *	Morrill's, \$900 F dos dis oc Clothes Line, Sargent's list dis oc Clothes line, Reading list dis occessors	T
其五	Celiling, Sargent's list	N
% %	Coat and Hat. Reading	P
明明天	Picture Hooks, Brown's Pat, Solid Brass, \$4.00 & gross	FOO
et	FIGURE HOORS, BYWIN'S PAR. SOIN BYBES, \$4.00 \$-4 gross. dis 25 d	B
* * *	Whiffletree-Patent. dis 15 5 Hooks and Eyes-Brass dis 60 to 5	F
深 第 3.	tiorse Niti s. Nos. c. 6. 7. 8. 9. 10. Ausable, \$\Phi\$ 5, sic 28c 2fc 25c 24c 25c dis 30&10 %	I
% et	Ausnile, 8 Oss. 6 7 8 9 10 Ausnile, 8 Oss. 6 7 8 9 10 Clinton, Plain, 8 B 280 210 200 190 180dia 30&10 % Clinton, Plain, 8 B 280 210 200 190 180dia 30&10 % Clinton, Plain, 8 B 280 210 200 190dia 30&10 % Essex. 10 10 10 10 10 10 10 10 10 10 10 10 10	B
50	Vulcam, "26c 23c 21c 20c 19c	BBB
%	Ch'mpl'in	PAN
%	Bridgewater, "24c 21c 19c 18c 17c 19c	1
×	Globe, " 24c 21c 10c 18c 17c 16c dls 17\2 5c dls 17\2 5c dls 17\2 5c dls 17\2 5c dls 12\2 5c.	A
万万 万	Mule Shoes. # keg \$5.37% Dunning's Steel. # keg 29.25 Loc A wis, Chiseis, &c.	B
5 55	** American fee Chiset	H
大大大田	Duni p's king Picks	L
" "	Ice Maliets, Pick in head # doz \$1.75 dis 15 \$ lee Maliets, Pick in Handle # doz \$2.00 dis 15 \$ lee Ases, "mall Cast or Malleable. # doz \$1.20 dis 10 \$	P
7. 7.	Combination Ice Tools	P
* *	Color Colo	B
%	Arctic Solid	BGE
K	100 100	2500
of the	Brass, 7 to 17 inches inclusive. B B 28c net Brass larger than 17 inches. B B 28c net K 61 ves. Ames' Butcher Knives 018 26 c Ames' Shoe Knives. dis 15 f Moran's Shoe and Bread Knives. dis 26 f Hay and Straw, see Hay Knives. dis 25 f Table and Pocket. See Cutlery	D
用海湖	Ames' Bread Knives	SCC
大田田	Table and Focket	8850
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KNNN	Door Villeral	SEV
気気を	Furniture Plain	E
N . N		D
	Melting, Sargent's	EPW
200	SECRETARY E. S. D. A. C. L.	D
N N D	4.au erus. No. 0, \$7.0; No. 1, \$9.00; Publiar. With Guards, 40c extra; Pet Nall City. No. 1 \$\tilde{0}\tild	Ja Ja
* * *	Hurricane, No. 2	H
4888	De Bequedis 10&10 \$	H
10.00	Porcelain Lined Bidge Man discret	Be
0	Porcellin Lined	81 81
0	Sammis'No. 1, \$4 2, \$8.40; 12, \$15 \(\psi \) doz; dis 25210 \(\psi \) Townsend's Patent \$0 00 \(\psi \) doz, dis 2522 \(\psi \) Jen 'ings' 'Star''	Sc I

1	Lines Linen Fish
١	Silver Lake, Braided, Nos. o. \$6.00; No. 1, \$6.50; No. 2, \$7.00; No. 3, \$7.50 % gross
1	Masons' Linen, No. 3/2, \$1.50; No. 4, \$2; No. 4/6, \$2.50. net
1	Wire Clothes, Galvanizedeach 250@400 net
	Cabinet, Eagle
	Cabinet, P. & F. Corbindis Cabinet, A. E. Deltzdis 30 7 40 \$
	Mission's College Cotton i.ocks and Latches i.ocks and Latches i.ocks and Latches i.ocks and Latches some numbers Jan. 1, 1881, cablinet, Englerd Some numbers Jan. 1, 1881, cablinet, P. & F. Corbin Sission cablinet, Bridgeport Sission dis 18 % cablinet, P. & F. Corbin Sission dis 10 % cablinet, A. E. Deltz Sission from Key, Nos. 10 c
	Round Key, Nos. 1 to 5
	Flat Key
	"Shepardson" or "U.S." dis 15 % "Felter" or "American" dis 10 %
	Platedis 35%2 % F. Many's "Extension Cylinder"
1	
	Branford Norwalk Nor
	Russell & Erwin Revised list of June 11, 188 Mattory, Wheeler & Co., dis 5c % and 2 % for cash.
	Nimick & Brittan Hard- ware Mfg Co
	Reading Hardware Co. (low list)
	Mallory, Wheeler & Co
	Yale Lock Mfg. Co.'s "Standard"
	Conestoga
	A. E. Dietz
Ì	Barnes M. F. Co
6	Mailets.—fickory dis rocto & Lignumvite dis rocto \$
	Penfield Block Co., Lignumvitæ & Hickory dis 30 % Ment (uttern. Divor/P S & W. Woo
	₩ doz. \$14.00 17.00 19.00 30.00—dis 25&5
	Perry's, Nos. 1 2 3 4 4 g'rd 5 g'rd
	Woodruffs (P. S. & W.)Nos. 100 140 140 140 140 140 140 140 140 140
6	Miles Chailenge
6	Each\$50.00 75.00 80 00 225.00 100.00 dis 27 5
5 5 5	
Š	Nos 10 12 22 2 E.ch
2 2 2	Kieser's Gem
6	Kieser's Butener
5	Each
6	Beef Shaver (Enterprise Mfg Co.) dis 20&10 %
	Am. (2d quality), # gross, r blade, \$7 2 blades, \$12 3 blades, \$18
	Smith's, & doz, Single, \$2.25; Double, \$3dis 33562: \$ Cowles Hdw, Codis 55 5
	Niciames Gales
6	Stebbils Tinued Ends
5 5 6	Lincoln's Pattern dis 60% to \$ Weet's dis 7 %
Ğ	a bludes, \$16. bet Lothr Ps
2 2 2	Nuts and Washers In lots less than ion
200	Square Nuts
200	Nashers 750c off list Nut Crackers, Beckley Mfg. Co.)dis 3346 \$
100	Blake's Puttern
ķ	Brat18 on 100 bales and over 12 % of D.
č	II S Navy B B 8 C
****	U. S. Navy # 75 c Navy # 75 64c Otters.—Zine and Tin dis 60 5
****	U. S. Navy W B S C
****	U. S. Navy.
ÿ K	U. S. Navy.
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7 公司 人名 石 石	Boss Nos. 1 2 3 40.00 Proceedings of the State of the Sta
Y XX LX CXX	U. S. Navy. Navy. Navy. # b 68c # bilers.—Zinc and Tin # b 68c # bilers.—Zinc and Tin dis 65 # Brass and Copper. dox, 65.00, dls 05 # Malleable (Hammer's).
Y ME LECKE C	Fabe. 's Round Gilt
YXXXXXXXX XXXX	Fabe. 8 Round Gilt. \$\psi\$ gross \$5.25, net Dixon's Lead. \$\psi\$ gross \$4.50, net Dixon's Lumber. \$\psi\$ gross \$5.75, net Dixon's Carpenters. \$\psi\$ gross \$5.75, net Dixon's Carpenters. \$\psi\$ dis solt to \$\psi\$ Pickss. \$\psi\$ (fix \$5.5] Railroad, \$1.50.6, \$11.50.6, \$1.50.5. \$\psi\$ (fix \$5.5]
PERSONAL RESERVE	Fabe. 8 Round Gilt. \$\psi\$ gross \$5.25, net Dixon's Lead. \$\psi\$ gross \$4.50, net Dixon's Lumber. \$\psi\$ gross \$5.75, net Dixon's Carpenters. \$\psi\$ gross \$5.75, net Dixon's Carpenters. \$\psi\$ dis solt to \$\psi\$ Pickss. \$\psi\$ (fix \$5.5] Railroad, \$1.50.6, \$11.50.6, \$1.50.5. \$\psi\$ (fix \$5.5]
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For Sawing Brass, Iron, Steel, Lead Pipe and Metals of

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Bern DoorInch	9 Hiding
B. D. for N. E. Hangers Small Med. Large. Per 100 feet \$2.10 2.70 3.70 30 30 30 30 30 30 30 30 30 30 30 30 30	Sher
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## Net ** ** ** ** ** ** ** ** ** ** ** ** **	Rquare Less Mpoi
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Gage's	Tinned
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Walker's	Brush T Leather Cigar Bo Chair Na
Common Sense," Japanned, Coppered and Bronged. # gross \$1.00 net Common Sense," Nickel Plated. # gross \$10 00 net dis ac \$	Tap I Common Ives' Tag
Sash Weights. Solid Eyes. in soo h lots and over Ph Michel Sansage Stuffers or Fillers.	Tapes America
Broughton's Bu-giar Proof Walker Substitute Springs Walker Substitute Springs Ham word's Window Springs Koomnon Sense, Japanned, Coppered and Bronsed. Common Sense, Japanned, Coppered and Eronsed. Common Sense, Nickel Plated. # gross \$1.000 to 100	Spring Chestern There Tin Case
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Na was Disston's Circular, Mili and Cross Cut. dis 40 5 Disston's Hand, Panel, Rip, &c. dis 20 5 Boynton's Lightining Cross Cuts, new list dis 40 5 Boynton's Lightining Cross Cuts, new list dis 40 5 Boynton's Lice and Mill. dis 40 5 Boynton's Lice and Mill. dis 40 5 Boynton's Lice County and Mill dis 25 5 Wheeler & Clemson Mrg. Co. 5 Hand. dis 25 5 Wheeler & Clemson Mrg. Co. 5 Hand. dis 30 5 W. M. & C. Mrg. Co. Cross Cuts. dis 30 5 Livingston's Butcher and Kitchen dis 20 5 Livingston's Framed Wood—	Tee Ca Winste Tinne
Livingston's Buttener and all clears Livingston's Framed Wood— Nos.	Machines Tools (P. Trans Wollenss
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Saw No.	Mouse, D Rat. "De
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Leach's No 0, \$8.00; No 1, \$15.00; dis 15 \$ Nash's . Mash's . Missok105	Clement Rose's Br Brades' B Worrall's
Semis & Call Co.'s Plate	Triers Butter an
Aiken's Imitation \$6.00, dis \$5 \\ Hart's Patent Lever dis 20 \\ Disston's dis 20 \\ Morrfil's No. 1, \$15 No. 5, \$52, dis 40&5 \\ No. 11's No. 5, \$52, dis 40&5 \\	Penfield I V 1000. Solid
Scales	Solid, Pet
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Forsyth Scale CO	Parallel, Parallel, Parallel, Parallel, Parallel,
Chatillon's Eurega	Parallel,
Scale Beams, List of January 13, 1882dis socio % Scrapers, Adjustable Box Scraper (S. B. & L. Co.), \$6, 50, dis socio %	Saw Filer Saw Filer Saw Filer Saw Filer Saw Filer
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Dission's Fatent Excession. dis 25 Bunck Bros. dis 25 Stamley Rule & Level Co.'s, Varnished Hdis.dis 60&10 Stamley Rule & Level Co.'s, Black Handies.dis 60&10 Stamley Rule & Level Co.'s, Black Handies.dis 60&10 Stamley Bouble Action Katchet g dos., 4 in., \$0.00: 5 in., \$10.20: 6 in., \$12.00—dis 25 % Mailett & Co.'s Double Action Clutch h dos., 4 in., \$0.00: 5 in., \$0.00: 6 in., \$0.00—dis 15 %	Market, C Market, G Market, Ti Stone, Bri Stone, Gai Stone, Tin Stone, Tin
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	Tinned Swedes Tacks	
	American Cut Tacks	BISTON
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1	Nashua Lock Co.'s	Same.
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000	Sizecision	
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No	velty No. 2, for Common Tubs	

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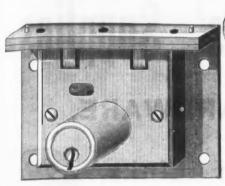
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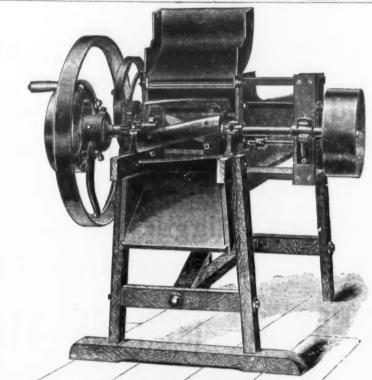
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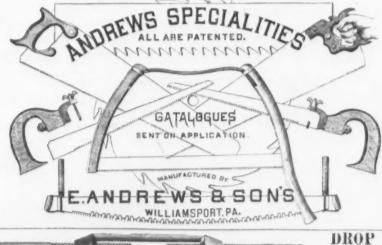


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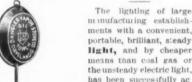
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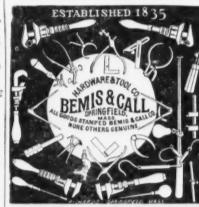


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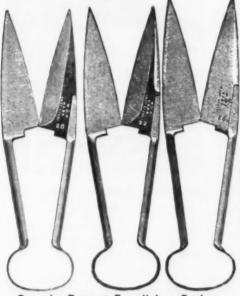
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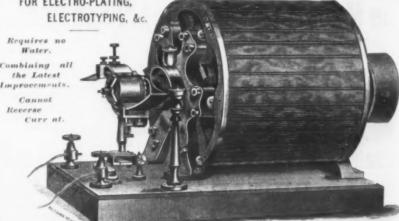
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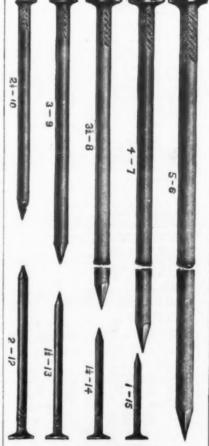


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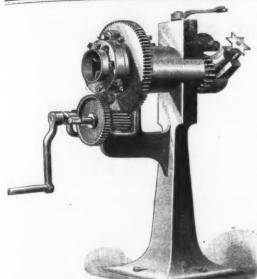
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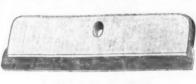
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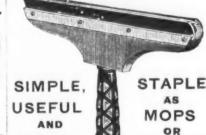
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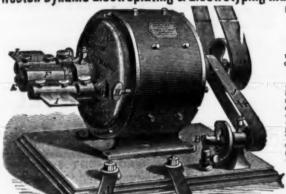
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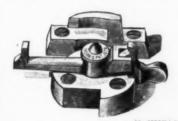
The improvement in Fasteners for the meeting rails of Window Sashes herein described, consisting of the base-plate provided with a rigid post, the sweep "C" journaled thereon and provided at its mee end with a pivoted latch, having a forwardly-extending arm which engages with a rigid notched is shouldered flange or plate, at the top of the post above the sweep, to lock the latter as described. Having lately secured of the United States Patent Office the above claim, and as it does not in the east infringe the rights of the Morris Sash Lock Manufacturing Co., we shall hold the said parties exponsible for all injury done our business by them, and shall protect our customers to the fullest extent against all claims of infringement by said Morris Sash Lock Manufacturing Co.

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SPECIAL NOTICE TO THE HARDWARE TRADE.

When we published our Circular to the Trade in August last, in reference to the Kempshall Gravity Sash Lock, no patent bad been issued to the Kempshall Company. But to our surprise the Patent Office last month granted them a patent, under which th'y are claiming the right to make their Fasteners.

The application for this patent was made by one William E. Sparks, and we ask the Trade to note that the Patent Office in acting upon it, wrote an official letter, on the 18th of last July, rejecting it on one Mr. Morris' patent of 1879, and saying:

"Morris, 23,487, Feb. 18, 1879, shows a Sash Lock which in every respect is equivalent to that shown and described in this (Sparks') "application. It is considered a matter of no consequence that the vlatch engages with the notch in the bottom plate instead of a top plate,

and it is held to be immaterial whether t'e locking notches are above or below the latch."

As the Patent Office in July thought the Kempshall Fastener the equivalent "in every respect," as they say, of the Morris Fastener, it will not be wondered at that we were surprised they should in September grant a patent for it.

We have determined to test the right of this Sparks-Kempshall patent to continue in existence, and we have therefore this week brought another suit against the Kempshall Company, under Section 4018 of the United States Revised Statutes, to have the patent declared void by the court, as being for substantially the same thing as our Mr. Morris' prior patent.

deciared void by the court, as being for substantially the same thing as our air. Morris prior patent.

The Trade therefore will please take notice, and are respectfully requested to await the result of the litigation before being influenced by the Kempshall patent.

Cincinnati, November 1, 1833.

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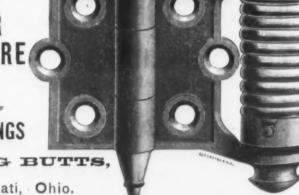


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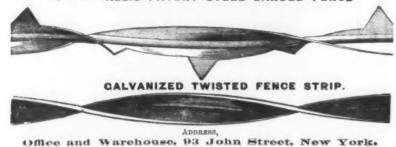
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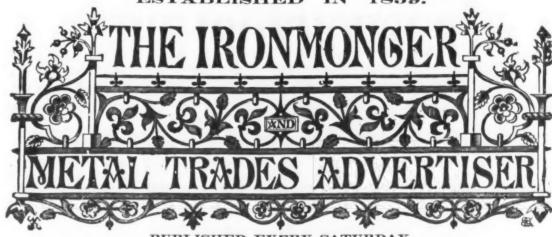
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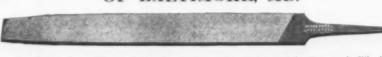
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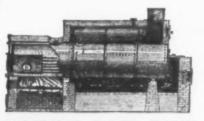
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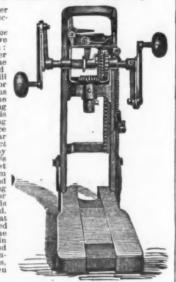
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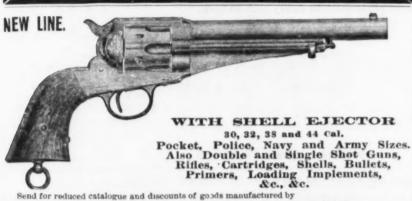
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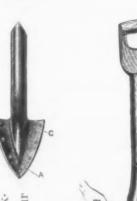
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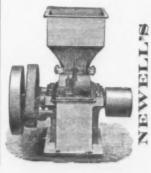
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	156 to 6 by Nos. 11 and 12
each form	I TO 136 DV 56 TO 3-15
each, \$2.15 dis 35 %	t to 1% by Nos. 11 and 12
01 2.05)	36 BPG 13-10 DV 56 EO 3-10
01 3.50) 01 4.00 dle 15 %	56 and 13-10 by Nos. 11 and 12
	94 BRG 11-10 DV 56 LO 3-10
	and 11-16 by Nos. 11 and 12
dia 25 %	and 9-10 by 16 to 3 16
# dox \$10.50 net	and q-10 by Nos. Hand 12
	inch by 16 and 3-16
dia 30 %	inch by Nos " and 12
dis 15 %	Hoop from.
per dos. net \$3.75	risto a Non re rand re
	134 to 4, Nos. 13, 14 and 15
330 pair net	134 to 2, Nos. 10, 17 and 18
330 pair net	154 toa, No. 19 3.
	134 to 2, No. 20
R og ath	134 to 2, No. 21
dia 25 %	154 to 2, No. 22
	15-10 I, and 196, NOS, 12-14 and 15
2 chot hobstb	15-10, I. BHG 198, NOS, 10, 17 and 18.
8 9 10	15-15. I. and 198. NOS. 10 and 20.
9 10	rests r and ris No. at

4.0C	
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op Iron do not apply to Cotton	١,
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ill be charged for each gauge	1
st indicated.	1
il be charged for cutting floops	ď

Of a Most spand on		
Nos. 19 and 20		5.IC
		5.20
52 ta No. 22		6 . 263
1Z ** No. 23		E 40
The prices under Hoop Iron of	o not annly	to Cotton
	o not apply	eo Costoll
Ties.	amond for	- 4
1-100 per lb. extra will be ch	strated for 60	ch gauge
lighter than the lightest indicat	led.	
1-10c per lb. extra will be char	ged for cutti	ng floors
to specified lengths.		- a aroopa
Barrel Hoo	208.	
11/4 to a in., cut to		
o to 11 lbs, per set of 6 hoops	sengen.	
8 lbs. and less than 9 lbs. per se		
a 10s' ward team runn à tos' bet, se	e or a noobs	3.00
Less than lbs. per set of 6 hoops	***********	3.80
Extrus for Cutting to Length	all Preceding	g Iron.
All Iron, including Tire	***********	301-1
Tank Iron		
No. 9 and heavier		0.00
Plow Slabs		11 111 131 90
PIOW SIMOS		******3-50
Wings		3.8C
Sheet Iron		
Common.	Charcoal	Juniata.
No. 10 to 143.50	5.00	6.50
No. 15 to 173.8c	5-30	6.8c
No. 18 to 214.10	5.6c	7.10
DATE TO SELECTION OF THE PARTY	20 mm	7.10

io. 18 to 214.10 5.6e 7.10	
(o. 22 to 244.30 5.8e 7.30	l i
(O. 25 & 26	П
0, 274.70 5.20 7,70	ı
(0. 28 a.6e 8.10	п
All shee.s No. 18 and lighter, over 30 inches wide,	Ι,
of less than 2.100 extra.	1 5
Wood's Patent Planished Sheet.	
at quality (A) tolec 2d quality (B) e	
Galvanised C. H. B(Charcoal Hammered Blooms.	
Toe. 14 to 20	
OS. 21 to 24	
os. 25 and 26 140 No. 29 180	1
45 @ 47% % discount.	6
upai Screen Iron.	8
M by % by 416 3.00 1 by % by 416 3.50	- 5
Angle Iron,	
6. 3. 3% and 4 inch	
12 14 2 and 24 inch	
4 Inch 3-40	
44	
by I inch, for Plow Handles	
by %	
by Dy W	1
T Katt.	6
lbs. to the yard2.9c 20 lbs. to the yard2.8c	-
ti "2.8c 282.8c	E
16 1J.8c 302.8c	0
Splice Joints for 12, 16 and 20-lb. Rail, 40c each : 28	
nd so lb. Ball. so. each: 40 lb., boc each.	
nd 30 lb. Kali. 60, e3ch ; 40 lb., 60c each. 46 by % and % Spikes for 20 and 28 lb. Rail 3%c 4 and 3 by % 12 and 16-lb. 4	
and 3 by % " 12 and 16-lb, "	2
2 by 5 10 " 8 10. Kall	2
Flat RailsPunched and Countersunk.	L
6 to 2 by 1/4 to 1/4 inch	
by % and 7-10 inch	
4 by 36, 7-16 and 36 inch	

Nalls.	
See Pittsburgh Trade Report.	
Best Quality Refined Cast S	ireal.
Square. Flat. Octagon and Rou	
Who a trahen inclusion and Rou	na.
% to 2 inches, inclusive	100
1-16 and 21a to 3 nches	
24 and 328 to 4	
/ 35 and 458 to 5	
3-16 and 514 to 6 "	
5-32 Inch	
16 Inch	200
Oil Well Steel Forgings	
Machinery Steel	
	Bessemer &
Crucible.	Open Hearth
Ordinary Sizes. % to 2 inch	She it Tie mi fi
Round 5360	alen
5-16 and 216 to 3 inches 614c	4790
4 and 314 to 6 " 7360	5120
	616c
7-32 incn	70

Size

No. 15. Floor Wheels 1 8-10 Diam.

eter.

b.	4 and 314 to 6 7390 6160	
ž.	7-32 Inch	
i.	3-10 ** 110 QC	
r i	Square, Flat and Octagon, 1/2c extra throughout the list.	
ξ	Cut to specified lengths, 1/2c extra.	
	Hammer Cast Steel	
E	Crucible Cast Steel	
L t	Open Hearth Cast Steel	
Ē.	Bessemer &	
L.	Best. 2d Qual. 3d Qual. Open Hearth.	
Ę.	To 21 gauge 11c foc 8c 6c	
E.	c. extra for each additional gauge. Cut to multiples or specified lengths, 16c. extra.	
£.		
į.	Miscellaneous Cast Steel.	
g	Auger and Auger Bit	
311.311		
ţ.	Frog Points and Plates70	
0	" Side Bars	
C E		
Ķ.	and Mattock, beveled (rolled)	
	Table Cutlery, plain	
0	Table Cutlery, beveled	
0		
0	Coar and Granite Wedge	
0	Roller	
0	Spinule, subject to Machinery classification	
O.	Trap Spring Steel	

51.00	Trap Spring Steel
51.00	Forged Crank Pins and Lathe Spindies
. 57 00	Piston Rods, plain
	torged to shapes
	Slide Bars, plain
	Slide Bars, plain
	Crucible. Open Hearth or Bessense
	Boller, Fire-Box and Flue Sheets not less than a st
rrent	
a per	Louisi. Fire DOX and Fine Sheets, not less than to
ate of	
	Circulars and semi-circulars, when ordered separ-
ints	
tts-	Locomotive Tank Steel
	File Cast Steel,
	Square. Round. Half Round and Flat Bastard. 8-

Smoke Stack to shape
Smoke Stack. to shape
File Cast Steet. Square. Round. Half Round and Flat Bastard. 8- Inch and over. 89c Mill Saw. 8-Inch and over. 89c Taper, 3½-inch and over. 95c Horse and Shoe Rasp. 89c
Spira Spira Cast Steel. 6140
IXM and over Tire Cast Steel. 8560
133-10, 3633-10 and 34
Solid Safe Cast Steel
Three and Five Ply Cast Steel

	and the state of t	
	Fork and Rake. Crucible	
	Horse Rake Steel, cut to lengths, Crucible	,
	Corn Stalk Cutter, beveled	,
	Bowoled Honored Character	
	Cruciole Flow Stee, III slane	
	Sessemer and Open Hearth	
	Spring	
	#DIFALARIG TADEL CHE to lengths	
,	Tire, -10 thick and above	
	Toe Caik	١
	Plow.	
	A vio Billota	
	Axle Billets	
	Sleigh Shoe	
	Cutter Shoe, cut to lengths and tapereu	
,		
1	Grain Drill Bars	
1		
1	Rolling Coulter Blanks, cut and punched	
	Whench as Stead	į

Teeth...
Rolled Hammer Billets
Terms.—Four months: a per cent, discount for if remitted within to days.

Furnace Floor and Straightening Plates
Housings and Castings not otherwise specified 24c
Guide Blates Castings not Otherwise specified 2%C
Band Rolls and Pinions, large size 3 c
Pipe Mili Castings 5 C
Dalling Will Continue of the continue of C
Spur and Bevel Wheels, large c
Pulleys up to 30 inches
over ac inches
Over 30 inches C
Engine Castings, light
heavy 0
Chilled Rolls
6 to in. diam., to 20 in. long 456
G co es em en
or to a two 40 and a two to the state of the
35 to 34 th. 15 to 73 th. 40
14 to 31 in. 73 to 108 in.
After Oct . 1881 no discounts with he mad

White and Red Lead.
Strictly Pure White Lead in Oil. in kegs. 61sc.: in 2s b Tin Pails. 1sc. b b over keg price: 121s b Tin
Palls. Ic # B over keg price; assorted, I to 5 B cans, 3c. per B ever keg price.
Dry White Lead in barrels
Red Lead, very brilliant, in kegs, 6 %c: in barrels 64c
Freights equalized with all points where White

Lead is made.

Terms: Note at sixty days, or if paid within 15 days from date of invoice a discount of 254 per cent, will be allowed, but not otherwise. Window Glass

Discount, 60 % on Single Strength, 60 % on Doub'e

		Single 8	trength.			
_		Size.	AA.	A	B.	U.
5 3	8 60 10	K 25	\$8.25	87.50	\$7.00	86.9
13 3	14 60 10	K 24	9.25	8.50	8,00	7.2
ISK	33 20 30 3	30	10.75	9-75	8.75	7.7
K 21	36 60 24	K 30	12.25	10.75	0.00	8,0
16 X	28 60 24 2	к 36	I3.00	11.50	9-75	9.0
K OR	30 to 30	E 44	14.40	13.25	10.75	9.5
K 05	40 10 30	K 50	0000 15.00	14.00	11.24	10.4
go N	52,10 30	54	I6.0c	14.50	13.00	
K O	40 to 34	£ 56	17.25	15,50	13.50	
54 X	58 60 34	K 60	18,25	17.35	15.00	
K Of	50 to 40 :	£ 60	20.75	18.74	17.25	
		e Strength.		-		
6 X	8 10 10 ;	K 15	12.74	11.74	10,75	10.0
KII	14 60 10 ;	K 24	I4.50	13,25	12.50	11.2
K 81	22 10 20 2	K 30	17.25	15.75	14.00	
15 X	36 60 24	30	19.75	17.35	14.50	
16 X	26 10 24 2	K 36	21.00	18.50	15.75	
26 X	36 60 20 3	E 44	23.25	21.24	17.35	
io x	46 60 30 3	K 50	84.00	22,50	18,00	
K OF	52 to 30 1	£ 54	25.75	23.25	19.24	
E Of	50 10 34 3	46	27.75	25.00	21.75	
14 X	58 80 34 3	L 60	29.25	27.74	24.00	
16 X	60 to 40 2	K 60	33.25	30.00	37.75	

an additional to per cent, will be charged for all glass more than 40 inches wide. All sizes above 52 inches in length and not making more than 81 united line has will be above.

	Hubbard	, Bakewe	Il & Co.'s (loods.
Drai Hoe	Double Bit Double Bit n Tools, list s, Planters' Scovili Ps Handled, dies, Cross Shovel c, Circular Long Cross Cut net Cross Cut net es, """	Lippincott James & C. Lippincott James & C. Attern Square Eye. Cut. Bent, Bore H. B. & Co. Lippincott	German	er dos. \$8.00 15.00 15.00 18.00 18.00 18.50 18.50 18.50 22.00 18.405 Per ft. 80.35 Per ft. 30.00 318.405 32.00 33.00 34.00 35.00 35.00 36.00 3



SEND FOR CIRCULAR.

YALE CASTER.

Nine Sizes Ready. Floor Wheels Ranging from 152-10 to 4 inches Diameter, 'For Furniture of all kinds, Factory Trucks, or Anything that Needs a Caster. No Wearing of Carpets. Turns Easily on Two Friction Rollers. A Perfect-Working Caster. A Gem of Art.

AGENTS:

Henry B. Newhall Co., New York and Boston. John Duer & Sons, Baltimore. H. H. & C. L. Munger, Chicago. Gordon Hardware Co., San Francisco.

MANUFACTURED BY THE

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GARDEN OR FARM BARROW With Jacobs' Patent Wheel.





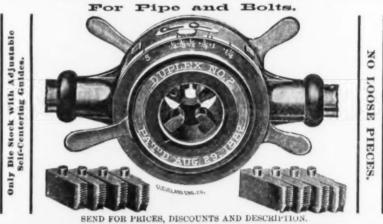
FOLDED FOR SHIPPING.

These Barrows are made with double frames, bolted together, iron braced, and so constructed that by removing one bolt (the axle) and two nuts, can be folded flat down (see cut), and shipped at lowest rate of freight. But a moment's time is required to set up for use.

We also manufacture a full line of

RAILROAD, ORE, BRICK and STONE BARROWS. Also, Road Scrapers, Road Plows, Levelers, &c. KILBOURNE & JACOBS MFG. CO.,

ADJUSTABLE "DUPLEX" DIE STOCK



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R. B. SEIDEL. Manufacturer of SUPERIOR BLACK LEAD CRUCIBLES For melting Steel, Brass and other metals. Black Lead Stopper, &c., for Bessemer St facturer of superior quality dammered Charcoal Iron of different sizes and shapes.

THE COLUMBUS WROUGHT STEEL SINK,

FOR BUTLER'S PANTRY AND KITCHEN. (Pat. April 12, 1881.)

Entirely new, being stamped from one plate of steel and superior to cast-iron sinks in every particular, being lighter, stronger and more durable.

These sinks, being made of wrought steel, will not break from heat, cold, or any cause whatever.

We furnish these sinks painted or galvanized, as desired, at prices
—freedom from breakage considered—less than for sinks made from cast iron.



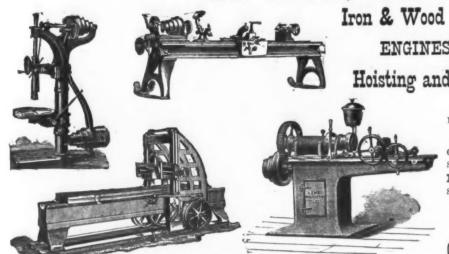
AGENTS:

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THE KILBOURNE & JACOBS MFC. CO., Sole Manufacturers, COLUMBUS, OHIO.

Catlery.—Pocket American Shear Co.'a.....dia sog Butcher Knies Woed's, Lap Bolster,

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Iron & Wood Working Machinery, ENGINES AND BOILERS,

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MACHINISTS' TOOLS.

Lathes, Planers, Shapers, Drill Presses, Gear Cutters, Bolt Cutters, Milling Machines.

CHUCKS-Lathe, Planer and Drill. SLIDE RESTS.

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CANTON TOOL STEEL.

HENRY B. NEWHALL CO.

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Chamfered and Trimmed, Square and Hexagon

MACHINERY NUTS.

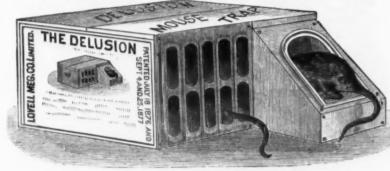
SQUARED AND TAPPED HEXAGON NUTS,

U. S. Government Standard Threads,

WARRANTED INTERCHANGEABLE.

Turn-Buckles, Clinch Rings, Bolt Ends, Chain Links Ship Chandlery Hardware.

DELUSION MOUSE TRAP.



And shuts the door by his own weig And then he jumps right through a And thinks he's out; but, bless his s He's in a cage, somehow or other, And sets the trap to catch another.

Manufactured Exclusively by the LOVELL MFG. CO., Limited, Erie, Pa.

TO THE TRADE.—Having purchased the PATENTS, TRADE-MARK, TOOLS, and everything pertaining to the DELUSION MOUSE TRAP, formerly owned by Messrs. Claudius Jones & Co., we are now the exclusive owners and manufacturers of that trap, and are prepared to supply the trade in any quantity and of superior quality. OVER ONE MILLION FIVE HUNDRED THOUSAND Delusion Traps have been sold. It is THE LEADING TRAP IN THE MARKET.

We also manufacture the **BONANZA** Mouse Trap.

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BAEDER, ADAMSON & Manufacturers of SAND & EMERY PAPER & EMERY CLOTH.

Cround Emery, Corundum & Flint, Ciue & Curled Hair, Hair Feit, & Feiting for Covering Boilers, Pipes, &c., Cow Hide Whips.

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Trunk Stays, Pad Locks,

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We are making a Road Cart that is strong, light, easy on the horse and rides as easy as a buggy. Easy to get in and out of. Cut shows No. 3, with seat swung buck ready to enter. Write for catalogue and prices.

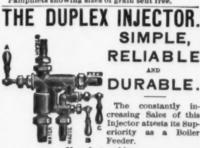
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No. 29 Murray Street, New York, Manufacture and sell the following celebrated brands of Sporting Powder known everywhere as ORANGE LIGHTNING,

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more popular than any Powder now in use.

Blasting Powder and Electrical Blasting Apparatus. Military Powder on hand and made to order. SAFETY FUSE, FRICTIONAL & PLATINUM FUSES.



Manufactured by JAMES JENKS. 48, 50, 52 and 54 Randolph St., DETROIT, MICH.

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Applied by ordinary workmen at one-third the cost of tia. Circulars and samples free.

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THE REIHER SELF-LOCKING IMPROVED TRANSOM LIFTE

A represents the Stationary Locking Bar; B the Self-Locking Adjusting Block; C the Operating Rod; D the Lower Bracket; E the Lifting Arm; F the Transom Bracket.

With this Adjustable Locking Bar and Lift-ing Arm, the opening of the transom can be made larger or smaller without the least inconvenience

Regular Sizes of Lifters for the Trade: 1/4 in., 5-16 in. and 1/4 in.

Duplicates of Arm E, n different lengths, furnished with first order.



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A xle Clips....Chatillon's... Bird Cages.— Japanned M. B. & D., reduced list, 1879 Brass M. B. & D., reduced list. 1879..... Brac Awi Handles,— Phœnix Adjustable. Bolts. - Norway Iron Carrie Common Iron Carriage...

	DOI MA. Montage		
	Horing Machines.— Engle Upright each	dis	50
•	Braces.—Barber's Spofford's	dis so	ale s
*	Bracket Sa wa.—Holly Scroll Saw. Denna Lathe and Scroll Saw. Bracket Saws, extra quality, to No. 5	each	6 0 0
	New Rogers, all iron	dis	25
	The state of the s	gross	75
)- (8	Brackets.— H. B. & M. Flower Pot. reduced listd Bronzed Shelf, M. B. & D., new listd Store Shelf	18 408 18 408	015
r	Butts Union Fast Joint	okiok okiok lis 70k lis 25k	10
,	Carriage Belts.—Eagle Norway	dis	75 5
	Carriage Jacks,—Climax No. 1. \$\psi\$ Climax No. 16 \$\psi\$ \$\psi\$ Climax No. 2 \$\psi\$ Climax No. 2 \$\psi\$ Climax No. 2 \$\psi\$ Climar No. 3. \$\psi\$ Climeral No. 2. \$\psi\$ Clinversal No. 2. \$\psi\$ Clinversal No. 5. \$\psi\$ Clinversal No. 4. \$\psi\$ Cl	ach ach ach ach	25 7 2.0 3.0 6.0 6.0
	Cartridges U. S. Cartridge Co	dia	65 9
-	Cards.— Watson's make Horse & Curry dis 10 %) Watson's Cotton its 10 %) Watson's Wool dis 10 %)	ev. L	Jat 803
	Cmaters.—Eed and Table. Chain.—Traces 656, 10, 4 winsted. Traces 656, 10, 4 winsted. Traces 656, 10, 4 winsted. Coll 3-10. Coll 3-10. Coll 5-10. Coll 5-10. Coll 5-10. Coll 7-10. Coll 7-10. Coll 7-10. Coll 7-10. Coll 7-10.	# h	100
	Chalk .—White, Carpenter's F. Red, Carpenter's F. Blue, Carpenter	dis	30 9 30 9
	Galvanized Wire, 100 feet each	t.dia	60% 60%

	Steak Knives
F	Steak Knives dis 25 Lap Bolster, Oval Handle dis 25 Stekking dis 25 Skinning dis 25 Skinning.
	Skinning disag Skinning disag Butcher, Common Round Handle, Wood's disag Shoe Knives, Wood's disag
ř	D Dividers,—Cook's
ľ	Dog Collars. dis 2c
	Gem Coil, new list
	Warner's
	Drawer Knobs.—Thurston'sdis to g
	Monne Streetwht Chanle
	Bmery.—Wellington Mills
	Bnameled Ware.— Standard Mfg. Co. Kettles
. [
1.	Files.—American File Codis 40 t
	Forks.—W. C. & Co., Manure.
	Gimlet Bita.—
C	Genuine cerman, No. 125, 1-32 to 8-32, per doz \$1.00 Plerce's
	Grab Heen.—K. P. & Co.'s No. 2, \$11.50 % doz.dis to 5
	The state of the s
)	Hangers & Rollers.—Anti-Frictiondis to a Acme Rollersdis to a Climar
	Hangers & Rollers.—Anti-Friction dis 2:2 Hangers & Rollers.—Anti-Friction dis 2:2 Acme Rollers dis 2:2 Cilmax dis 2:2 Common Hangers dis 2:2 Common Rollers dis 2:2
	Hand Screws
	Underhilldia go ç
-	Hay K nives, - Lightning
À	Providence Plate.
ı	Hooks and Stanles - Prowers' (now list)
	Horse Nails No. 6 7 8 9 Sational Finished 33 .21 .20 .19 dis 2-5 Putnam Pointed .24 .22 .22 .23 .25 Bridgewater .21 .19 .18 .17 list
	Putnam Pointed24 .22 .21 .2057 Bridgewater21 .19 .18 .17 list
	Knebs"Norwalk." New listdis to dis to s
5	Ice Cream Freezers Packer's, new list,dls as K.nebs "Norwalk." New list dls sat Silver Glass dls sat Silver Glass Bell Pulls
Ü	Lanterns, -Tubulars, No o
7	12 in. cut.
	18 in. cut
R R.	Lead.—Sheet
ad	Locks Norwalk dis tot Eagle Cabinet dis 25 Eagle Cabinet dis 25 Eagle Trunk dis 25 U.S. W. Wilcox & Co., Padlocks dis 25 U.S. W.
_	
	Mattocks. K. P. & Co., Long Cutter, \$15.00 F doz. dls of K. P. & Co., Short Cutter, \$15.00 F doz. dls of K. P. & Co., Pick Cutter, \$15.00 F doz. dls of Measuring Tapes.—Eddy*.
	K. P. & Co., Pick Cutter, \$15.50 \(\psi \) dos dis 50 \(\psi \)
	American. dis 25 g
	American dispersion di
=	Palis P Keg 2.10
	Ollers.—Zinc and Fin. dia to 5 Brass and Copper
%	0x Bews.—Extra finished and varnisheddis 10 1 1½ in., ₹ dos. pair\$7.00 2 in., ₹ dos. pair\$1.00 1½ in., ₹ dos. pair \$1.00 1½ in., ₹ dos. pair \$2.00 1½ in., ₹ dos. pair \$2.00 12½ in., ₹ dos. pair.
	Paper .—Tarred Sheathing
HHHHH	PicksK. P. & Co., Adze Eye, 5 to 5 B \$12.00dis 50 k P. & Co., Adze Eye, 6 to 7 B \$13.00
×	Planes dis nr Fancy Planes Ware Rogers & Bro. dis nr Fancy Planes Ware Rogers & Bro. dis nr Fancy Planes Gas
%	Razee Planes
MMEN	Bailey's
00	Pites — Von Cleff & Co.'s
%	Piters.—Vom Cleff & Co.'s
50	Pocket Knives.—American Shear Co.'sdis 40 % Potate Diggers.—W. C. & Co., reduced listdis 40 %
(Q) (Q) (Q) (Q)	Pulleys.—Acme or Excelsior, 2% in
C 5.	Pulley Blocksdis 35 % Pumps.—Union Manufacturing Co.
0	Pampa
000	Rivets.—Black (new list)
E	Rivers.—Black (new list)
*	Rules.—Staniey, Boxwooddis 70 &10 %
0	Stanley, Ivory
0 0	Tailors Geese
0	Bash Locks.—Aink & Mutchinson's, new list dis 40%
4	Sandpaper. —Baeder & Adamson
	Sash Weights.—Patent kye
6	Wheeler & Clemson dis 20 5 Cross-Cut Saws.
1	W. M. & Co., Common Tooth, No 1 # foot 350 W. M. & Co., Champion Tooth # foot 350
	Disston's Common Tooth foot 68c dis 40 % Disston's Great American Tooth foot 68c dis 40 % Boynton's Light sing Tooth
5	Wheeler & Clemson dls 20 5
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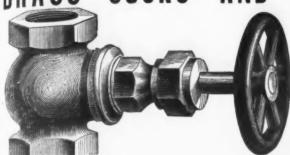
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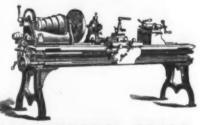
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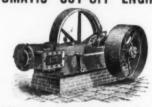
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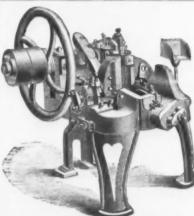
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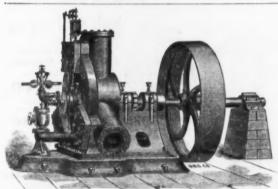
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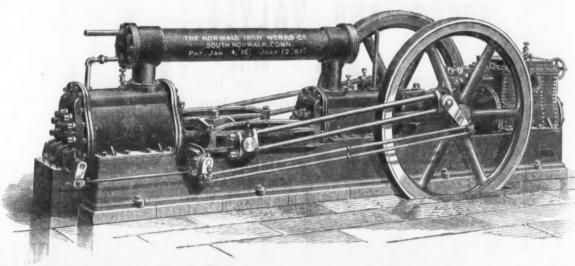
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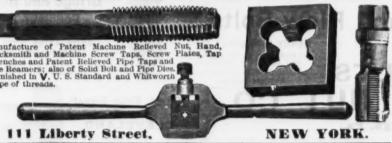
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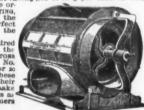
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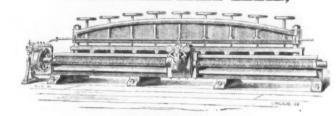
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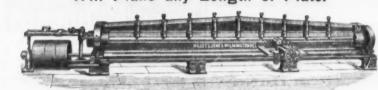
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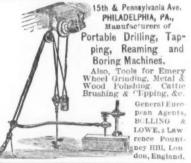
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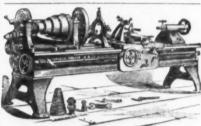


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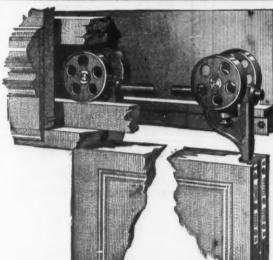
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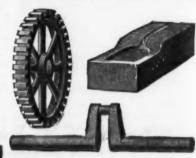
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